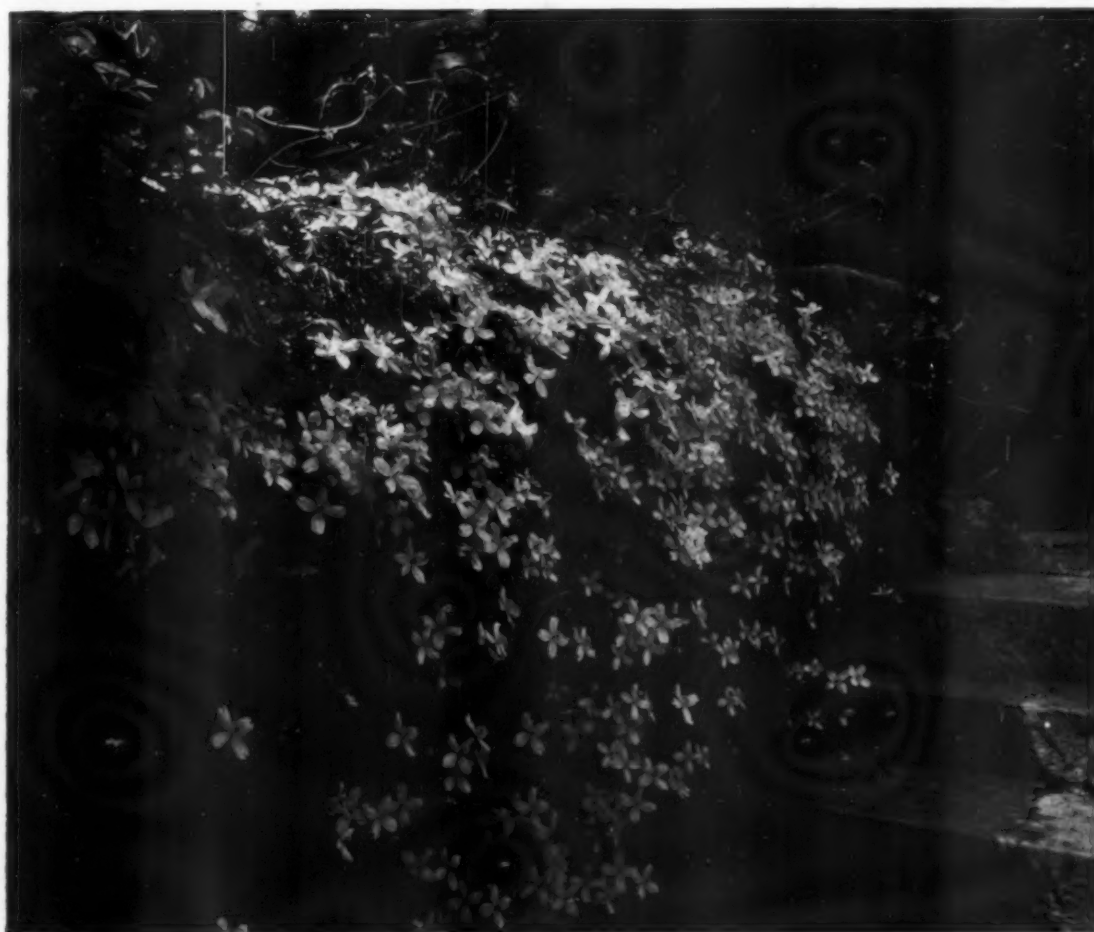
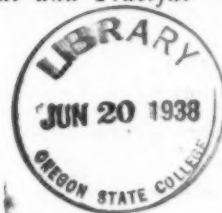


AMERICAN NURSERYMAN

The Nurseryman's Forte: To Make America More Beautiful and Fruitful

JUNE 15, 1938



Clematis Montana

California Horticultural "Roundup"
Identifying the Lindens
Plants for Wall Gardens
Obtaining F. H. A. Loans

AMERICAN NURSERYMAN

Chief Exponent of the Nursery Trade

F. R. KILNER, Editor

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subjects and papers prepared for conventions
of nursery associations.

BIG JOBS OR SMALL?

One well established and prominent nurseryman in a certain locality records having made a careful canvass of every prospect during the past season. Bids were submitted on all institutional contracts, the builder of every home costing over \$20,000 was interviewed, all estate owners were canvassed, and customers and prospects were sent two mailing pieces and some a personal letter. The season's business fell behind last year's because orders were fewer and generally smaller.

Another lesser nurseryman took in more territory, in a search for further prospects. In the better residential districts he noted dying trees, misshapen evergreens, overgrown shrub plantings and the like. In an individual letter to each homeowner he called attention to the particular need and told what might be done with an expenditure of \$50 or \$100. Some of the homeowners responded not at all, others with orders of small size, while still others, stirred with a new vision of their grounds, developed an enthusiasm that resulted in sizable planting orders. The nurseryman was gratified not only to have brought his season's total business ahead of last year's, but to have made new customers and friends. He felt much more than repaid for the time spent in driving around to gather his suggestions and in dictating the letters to convey them.

Every established residential community holds the opportunity of developing many orders, some small and some large. But until someone

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calls the attention of homeowners to the appearance of their plantings, they are likely to continue unaware of their neglect.

SPRAY FROM AUTOGIRO.

Due to the highly successful results of an experiment early in June in using an autogiro in spraying for the control of insects on evergreen trees in northern New Jersey, Frank A. Soraci, in charge of nursery inspection for the New Jersey department of agriculture, predicts the autogiro method of controlling insects will come into more general use.

"For several years, nurseries, in particular, have been interested in the autogiro method of controlling insects," Mr. Soraci declares, "because it is especially adapted to the need for applying all of the spray over a large area within a short time. The method of spraying from the air has already been used with excellent results in some counties in New Jersey where it was necessary to protect large areas of deciduous foliage trees from cankerworm infestations."

In some of the larger nurseries, he adds, parts of the land are almost inaccessible to spraying crews on the ground and a well trained and experienced ground crew would require a day to cover the acreage which an autogiro crew could treat in an hour.

"In consideration of the results already obtained from the autogiro method of spraying," Mr. Soraci concludes, "it is not too visionary to believe that in the future insect infestation will be controlled from the air before heavy damage is inflicted."

CLEMATIS MONTANA.

Among the early-flowering clematises, that illustrated on the front cover, *C. montana*, is one of the finest, at least when its varietal forms are included. The plant is a vigorous climber, requiring considerable space to be seen at its best. It is splendid for covering pergolas, old stone walls, balustrades or fences and is equally decorative when trained against a stone building. It will grow as much as twenty feet, bearing its white flowers

in great profusion during May and June. The varieties flower several weeks to a month or more later than the species.

The blooms are from one inch to two and one-half inches wide and as much as three and one-half inches in the form known as *grandiflora*, in which the flowers are also purer white. This is preferable to the type and can be grown from seeds, also. Variety *rubens* bears clear deep pink flowers, those of *undulata* being lighter, a soft more mauve pink. *Wilsoni* has white flowers somewhat larger than those of the species, but the plant is tenderer than the type, so that it should not be used in the northern part of the country. When planted in protected places, *montana* and its varieties are hardy to Maine along the eastern coast, to about the latitude of Chicago in the middle west and, of course, to Canada along the western seaboard.

This clematis, including its varietal forms, can be reproduced by means of seeds. It can also be readily propagated from cuttings taken during late summer and placed in an outdoor propagating frame. Or plants may be forced under glass for supplying cuttings during late winter and early spring. A temperature of 60 to 65 degrees should be maintained in the propagating bench.

The mountain clematis, or great Indian clematis, as this climber is sometimes designated, thrives in a cool shaded root run in rich moist soil in a spot where the top can reach the sun. The location should be well drained, and as with most other clematises, a generous supply of lime is desirable. It is likely the cool moist conditions generally prevalent around stone walls and buildings that account for the splendid response of clematises in such situations.

The vigorous growth of *montana* enables it to climb into trees and over shrubs, under which conditions it is to be found in its native Himalayas, and gardeners can achieve some lovely effects by planting the mountain clematis where it can clamber at random. This obviates any necessity for pruning, too, which is not desirable with this species, as it flowers on year-old wood. The removal of deadwood is the only pruning that should be done.

AMERICAN NURSERYMAN

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The Chief Exponent of the American Nursery Trade

*The Nurseryman's Forte:
To Make America More Beautiful and Fruitful*

VOL. LXVII

JUNE 15, 1938

No. 12

California Horticultural "Roundup"

*One-day Course Held at Del Amo Nurseries Features Talks
on Problems of Nurserymen in Southern Part of Golden State*

One hundred and fifty nurserymen registered for the one-day course in horticulture and the allied nursery industries' exhibit held at the Del Amo Nurseries, Compton, Cal., May 23, when the members of Horticultural Industries, Inc., gathered to hear headline authorities from the University of California, California Institute of Technology, California department of agriculture, Federal Housing Administration and United States Department of Commerce talk on subjects of mutual interest and importance.

Developed as a result of the announcement that the University of California will establish at Westwood a school for subtropicals and ornamentals, the roundup was organized by Lou Johnson, secretary of Horticultural Industries, as a point of contact for nurserymen to bring to the light their problems for discussion and for representatives of the school to learn what these problems are and how they may affect the university's program. Questionnaires were sent out to the membership, giving them the opportunity to state what subjects would interest them. Suggestions included hybridization, office records, greenhouse practice, pest control, successful production of stock in cans, soil conditioning, fertilization, transplanting and root pruning, irrigation, forcing and lengthening period of bloom, care of deciduous material, displays of material and customer appeal, and selection, use and care of tools.

Dr. W. H. Chandler, assistant dean of the school of horticulture, told of the plans of the university

for the school for subtropicals and ornamentals. He expressed the school's interest in the nurserymen's view of the work that should be done at Los Angeles and gave an outline of plans for the future.

Dr. P. A. Miller, assistant plant pathologist at the University of California, gave a comprehensive talk on "Disease Problems of Ornamental Plants in Southern California," reported fully below.

"Insect Pest Problems and the Work of the Entomologist" were discussed by Ralph H. Smith, professor of entomology at the University of California, Los Angeles. His talk appears in full in this issue.

J. Lee Hewitt, chief of the bureau of nursery service, California department of agriculture, discussed the use of botanical names on nursery stock, as required by the grades and standards law, and his talk was of extreme interest to those in attendance, who are charged with fulfilling the requirements of the law in the conduct of their everyday business. His interesting treatment of the question of botanical names is given in full in this issue. Mr. Hewitt concluded with a reference to the way in which associations such as Horticultural Industries are contributing to the success of the grades and standards act and the fact that the preponderance of nurserymen understand the benefit and importance of its provisions.

Harold J. Ryan, Los Angeles county agricultural commissioner, spoke briefly. W. O. Harris, of the Federal Housing Administration, told "How to Get Landscaping in Hous-

ing Loans," giving some practical help in a field that means sales. J. Edgar Dick, of the United States Department of Commerce, spoke on "Balancing the Business Budget."

The guest of honor was Albert B. Morris, president of the California Association of Nurserymen.

The success of the roundup will probably lead to plans for holding such events quarterly, as part of the regularly scheduled gatherings of Horticultural Industries.

INSECT PESTS.

By Prof. Ralph H. Smith.

Insects and man are contestants in a struggle for supremacy over the plant life of the earth. This contest began when man appeared on the earth a few thousand years ago. Insects were here fifty million years ago, and in a sense they have a 50-million year advantage over man. This head start has enabled insects to develop along hundreds of thousands of different lines morphologically and to acquire myriads of highly specialized modes of living. Since man began his systematic study of animal life about 150 years ago, approximately 600,000 different kinds or species of insects have been named. It has been estimated that there are five million species yet to be studied and named. Nearly every plant is attacked by insects of many different species, and the injury is done in many different ways. The 17-year cicada spends seventeen years in a nymph or immature stage feeding upon the roots of trees and only

a month in the adult stage feeding upon the branches. An aphid on the same trees will complete its life cycle in four or five days and will provide enough progeny in a month to ruin the foliage.

The 600,000 known species of insects are grouped into twenty-five orders. The insects of each order possess certain common characteristics, which distinguish them from the insects of all other orders. For example, there is the order diptera, which includes insects having two wings; the order coleoptera, which includes insects having horny front wings, and the order lepidoptera, which includes insects having the wings covered with scales. The insects of each order are arranged into smaller groups known as families, and the families are farther divided into genera. The genera are formed of species of insects all possessing in common some minor anatomical characteristic.

The first task of the entomologist, when given a particular insect, is to identify it; that is, to determine which one of the 600,000 known species of insects it is, or to determine whether it is a hitherto unknown species. Having the name of the insect, he can turn to indexes of entomological literature and find out what is known concerning it. The literature of entomology comprises upward of 275,000 separate publications. The Library of Congress at Washington has the largest library of entomology in the western hemisphere. Often information concerning an insect must be obtained by writing for it. At present there are some fifty-five periodicals in the world devoted exclusively to the publication of entomological knowledge. The University of California at Los Angeles is a subscriber to sixteen of these periodicals.

Long ago it became humanly impossible for any one person to be familiar with all the knowledge of entomology. It became necessary, therefore, for the entomologist to specialize and restrict his interest to some special branch of the science of insects, with the hope of being an authority in that branch. Many such branches of entomology became well recognized years ago. They include medical entomology, household entomology, forest entomology, agricultural entomology, insect toxicology, biological control, insect taxonomy, plant quarantine, and many others. With the great importance that has been attached to insects the past twenty-five years, the entomologist has found it desirable to specialize still more in order to be an authority in a particular field of the science.

The development of work in ornamental horticulture and floriculture at the University of California involves, among other things, an addition to the special branches of entomological endeavor. In the eastern states, occasional publications on greenhouse pests and pests of ornamental plants, including shrubs and ornamental trees, have appeared during the past quarter century. However, no systematic and comprehensive study of this field has ever been undertaken. The field, therefore, has remained relatively unexplored.

How to tackle the undertaking with the most effectiveness is a question that is now receiving consideration. What are the most important pest problems of the industries that are concerned with ornamental plants? Consideration must also be given to the needs of the home gardener and the service gardeners, who all too frequently see their labors completely set to naught by the devastation of pests. Among other things, it will be profitable to bring together existing knowledge concerning pests of ornamental plants and to systematize or catalogue this knowledge according to kinds of pests and kinds of plants. Many insect pests are well known to the nurseryman and the gardener. On the other hand, a large number of the insects concerned have never been identified as to name. Without doubt some species will be new to science. A few new ones have already been taken.

In a survey of the flowers, shrubs and trees at a well known home in Los Angeles, 132 species of insects were recorded. Some of these were beneficial insects—parasites and predators—which attacked the injurious forms. The head gardener knew the correct names of about a half-dozen. He was completely baffled by the ruinous attack of a small caterpillar in the flowers of a large planting of chrysanthemums. The owner said that pest-control operators under county license had been called in regularly to make treatments once or twice a year. They had done well, but continually he was confronted with knotty problems like the chrysanthemum caterpillar, where the only remedy seemed to be to destroy everything and start over again with something else.

Later I went over the property with the pest-control operator who had been engaged to do the treating. He was competent and reliable as far as his knowledge went. He knew all the standard remedies and had good equipment for applying them. He did not know the life history of the insects, much less their names, and was just as baffled as was the owner at the chrysanthemum problem. This particular experience of a homeowner and the pest-control man suggests one phase of service and investigation in the field of insect pests of ornamental plants. The problems of the commercial florist and the nurseryman probably will require the major consideration.

DISEASE PROBLEMS.

By Dr. P. A. Miller.

One of the most perplexing features of the disease problem is the diversity of the plants grown and used in ornamental plantings. In almost every case will be found, side by side, natives and exotics, cool temperate zone and subtropical or tropical zone plants, everything from conifers to cacti and abies to yucca, under the same environmental conditions and receiving the same care, or lack of it, regardless of their specific cultural requirements or environmental adaptations. As a result, some of these plants are found affected by fungous or nutritional maladies that had not previously been observed or reported. Oak root fungus, *Armillaria mellea*, attacking *Annona cherimola*, and lime-induced chlorosis affecting acacia, rose, eucalyptus and other plants grown within certain areas may be cited as illustrations.

Soil conditions of the region are extremely variable. The lime-induced chlorosis affects plants growing in soils having limestone present at or near the surface. Fungous root rots, such as *armillaria* root rot and *poria* root rot, as well as gummosis diseases of the crown and roots, are favored by the heavier soil types or those hav-

ing a high water-holding capacity. Nematodes are most abundant and destructive in the lighter sandy soils. Not only do the soils of the region vary in their physical structure, but they also vary in other characteristics. Not the least important of these is the amount of water-soluble injurious salts, or, in other words, the amount of alkali, present. The investigation of plant-disease problems must, therefore, include a consideration of soils and their relation to the health and vigor of the plants grown in them.

In all parts of southern California, irrigation water must be applied, and both the quantity and quality of the water vary widely. The average gardener seems to think that all that is necessary to maintain plants in full health and vigor is to apply plenty of water. On heavy soils the result is overirrigation; on lighter, deep and well drained soils considerable water may be desirable, even necessary.

Little thought is given to the quality of the water, generally, and it may contain common salt, boron or other constituents in sufficient quantities to cause injury. Thus it has been shown by Horne and Palmer that the fungus causing dothiorella rot of the avocado fruit in the vicinity of Carlsbad, Cal., establishes itself in the tip-burned leaves, which are the result of the presence of common salt in the soil and irrigation water supply. The presence of boron is well known, and the effects of its use on citrus and some other horticultural crops has been observed. No answer can be given now to the question of the effect of these irrigation waters on many ornamental plants now grown in areas supplied from the present known sources of boron. Some ornamental plants may already be exhibiting symptoms of boron injury, although these symptoms have not yet been identified as due to this cause.

In southern California, the range is wide between the extremes of temperature, rainfall and other factors, as, for example, between those of the Colorado desert and those of the southern coastal belt. Since climatic conditions are important contributing factors in the development of parasitic diseases, these differences in temperature, atmospheric humidity, etc., are sufficient to account for the presence or absence of a certain disease in any particular area. The observations of men engaged in the business

of moving large trees from one area to another are of interest. Native oaks that have grown in the warmer, drier climate of the interior show no evidence of ever having been attacked by oak mildew. These same trees, moved to the coastal areas, where cooler, more humid atmospheric conditions prevail, are often severely attacked by mildew.

Variation in the amount of annual rainfall must be taken into account. Last year and this year, for example, have been characterized by extended periods of cool, cloudy and rainy weather, with more than the normal amount of precipitation. Outbreaks of such diseases as brown rot and gummosis of citrus, alternaria leaf spot of pansy and sclerotinia rot of various plants have been unusually prevalent.

Last, but by no means least, is the problem of effective control measures for the diseases that are present in the area. The small amount of previous work, the diversity of plant materials used and the differences in the soil and other environmental conditions from those in other regions make it difficult, if not almost impossible, to offer advice with any feeling of confidence that the measures suggested will result in a satisfactory degree of control. One may find in literature control measures based upon experimental work done in the eastern states, in New York, Massachusetts, Ohio or Wisconsin. Under the conditions that exist there, the recommendations are, no doubt, sound and if carried out precisely will result in a high degree of disease control. The same treatments or measures applied under southern California conditions may prove to be either partially or

wholly ineffectual or may injure the plants to which they are applied. Investigation and experimental work toward effective, safe and practical control measures are sorely needed.

BOTANICAL NAMES.

By J. Lee Hewitt.

Why should we have to use the botanical name? Why should we be required by law to use a Latinized form for something we wish to sell? Remember, this is not the Latin language. California law could not require us to use the Latin language. This is simply a Latinized form of ordinary words. But why should we use these longer, unfamiliar Latinized words instead of good old common names?

The reason is, for definiteness. Botanical names are definite; each different name means a different plant, and each different plant has its own name. This is not true of common names. Let us talk about one particular kind of plant that is for sale in this nursery. Its common name is mock orange. Suppose, however, that you should come to the proprietor of this nursery and ask to buy a mock orange. Would you get this plant? Probably after a great deal of explanation you could get this plant, provided you were sure what you wanted and persistent enough to insist upon it. This name has been applied to many different plants, and the nurseryman would have to ask which one you wanted. Would it be *Choisya ternata*, *Poncirus trifoliata*, *Citrus taitensis*, *Maclura pomifera* or *Pittosporum Tobira*, or would it be a variety of philadelphus? Those are all called mock orange.

It happens that the plant we started out to consider is a kind of philadelphus. There are many kinds of philadelphus. Which of the forty-one species and forty-three named varieties, a total of eighty-four well recognized different kinds of philadelphus, do you want? They range all the way from 20-foot shrubs to low trailing plants. They have flowers from two inches across to one-half inch across. Some of them are sweet-scented and some are not. The commercial kind, and a highly useful kind it is, is *Philadelphus coronarius*, sweet-scented, with white blooms in clusters and an odor suggesting jasmine. It is well called



Lou W. Johnson.
(Secretary, Horticultural Industries, Inc.)

mock orange. But there are ten varieties of *Philadelphus coronarius*.

The shrub we are talking about is much like the type form of *Philadelphus coronarius*, but is evergreen. It is *Philadelphus mexicanus*.

Now, here is another thing about common names. Not only do many different plants have the same common name, but the same plant can have many common names, even in one language. This shrub can be called mock orange, but it can also be called syringa, and then we would be confusing it with the lilacs. It can be called white pipe shrub, or it can be called white jasmine. There are four different common names for this one shrub, and each one of the four would confuse it also with other shrubs.

That sort of confusion does not arise when we decide upon one botanical name that shall belong to this kind of shrub alone, *Philadelphus mexicanus*.

Botanists are the persons who study plants. They decided that because of this confusion of common names, a system of naming was needed, and the science of naming plants is called systematic botany. Latinized words are used in this system, because words from any language can be Latinized and botanists anywhere in the world can understand them. Baron von Linné devised a system for naming plants and living things and it was called the Linnæan system, which is the Latinized form of his name. We use a modification of the Linnæan system, modified slightly as the number of plants and their variety became great and as we began to distinguish them by more and more detailed characters and modified slightly again as we learned to hybridize plants and to breed from mutations. However, in spite of the modifications, we are following essentially the same plan that was laid down by Baron von Linné.

The plan was to put similar plants into groups and give them group names and divide the groups into subgroups and give them names, then subdivide these farther and farther until finally we got down to a name for plants which are essentially alike.

Plants could be classified in various ways; for example, by color, but that would be confusing, for we should find yellow varieties of rose classified along with sunflowers, and red

roses along with some hollyhocks and some geraniums. Plants could be classified by size or by kinds of leaves. Botanists have chosen to put into one group plants which seem to be related to each other when all characteristics are considered. They find that four great groups or divisions can be made of all plants. Division I is thallophyta, plants without true roots, stems, leaves or flowers, but only imperfect substitutes for these organs. Lichens, which encrust rocks and stumps, are plants of this division. Division II is bryophyta, mosses and liverworts, which are more highly organized than the first. Division III is pteridophyta, the ferns and several kinds of somewhat fern-like plants. Division IV is spermatophyta, or seed-bearing plants. These have roots, stems, leaves, flowers and seeds. In some plants some of these organs bear curious forms. Nevertheless they are present. Most ornamental nursery stock belongs in division IV.

Division IV is divided into two subdivisions, first gymnosperms, comprising plants which have naked seeds, such as the conifers, cycads, ginkgo and the like. Subdivision II, angiosperms, comprises those plants which have seeds borne inside of a closed covering or fruit. The fruits are various in size and form, from the grain of grasses to nuts, berries, apples, melons and many kinds of dry fruits, which we call seed pods.

The angiosperms are divided into two classes. Class I, monocotyledones, comprises plants having one seed leaf when the seeds germinate. These plants usually have parallel veined leaves, like grasses and palms. The flowers are built upon the plan of three, three parts or six parts of each kind. These are the grasses, palms, lilies and the like. Class II, dicotyledones, comprises plants having two seed leaves when they germinate. The leaves are usually netted-veined and the flowers are usually not on the plan of three. These are broad-leaved herbs, vines, shrubs and trees, and among them are many of the kinds of ornamental nursery stock.

The dicotyledones are divided into two subclasses. The archichlamydeæ have flowers with separate petals or no petals at all. The sympetalæ have flowers with petals united into a trumpet-shaped, cup-shaped, tube-shaped, bell-shaped or saucer-shaped corolla. It happens that our par-

ticular kind of a mock orange belongs in the archichlamydeæ.

In this subclass there are some twenty-four orders. One of these orders is rosales. You can see a sort of distant family resemblance between our mock orange and a rose.

In the order rosales there are some ten families. One of these is the family saxifragaceæ. This is a large family, having many kinds of plants, but they have a type of flower that is recognizably similar in all of the kinds. In this family there are about seventy genera. One genus is *philadelphus*.

Now, when we use a botanical name we do not need to write down all of this long series of groupings and subgroupings, for the botanists have been careful to see that there is only one genus *philadelphus*. We need to use only this genus name and a species name to distinguish between the forty-one different species of this genus. Sometimes we need to add a variety name, if the species contains more than the single type variety. This plant is *Philadelphus mexicanus*.

Now, sometimes we horticulturists have not been strictly careful of our use of botanical names. For example, once someone thought he wished the species name of this plant to tell about its evergreen character and he called it *Philadelphus sempervirens*. However, that is not a correct name. The name *mexicanus* was given first and is the only correct one. The name *guatemalensis* was given to some plants of this species at one time by someone who thought that the Guatemala form of the plant was different from the Mexican form. But that is not so. When we grow the two side by side we see that there is not enough difference between them to warrant a name, and the older name, *mexicanus*, must be used.

Now here is another point. The genus name, *philadelphus*, is masculine in its Latinized form, and so the species name must be masculine in form; hence it is *mexicanus*. If the genus name were feminine in form, as for example, *fremontia*, then the species name would be feminine also, and we should have *Fremontia mexicana*.

There, then, is the true and proper name for the shrub about which there has been all this talk.

Identifying the Lindens

Sixth in Series of Articles Discusses Characteristics of Three Hybrid Lindens, Tilia Flaccida, Floribunda and Euchlora — By Leon Croizat, of the Arnold Arboretum

In previous articles I have discussed the hybrid lindens that are frequently seen in cultivation; namely, the common linden, *Tilia vulgaris*, and the Moltke's or Riksdorf linden, *Tilia Moltkei*. Three other hybrids are left for present consideration, *Tilia flaccida*, *Tilia floribunda* and *Tilia euchlora*. Only the last-named has horticultural importance, and its characters have already been compared with those of other lindens with which it can be confused. Although *Tilia flaccida* and *Tilia floribunda* are seldom used, and little understood as a whole, it seems advisable to give them some attention. They are found in cultivation mostly as isolated specimens, being often sold under wrong names and planted where they cannot succeed.

Tilia flaccida, or flabby linden, is a hybrid of *Tilia americana* with *Tilia platyphyllos*. To my knowledge this linden has never been commercially propagated on this side of the Atlantic. Before the World war our nurserymen had it from Dutch and German dealers. Although little of the originally imported stock and of its propagations is available today, a specimen occasionally comes to the market, being usually sold together with and under the name of *Tilia americana*. *Tilia flaccida* has no merit that can justify its employ in landscaping. It is much affected by adverse conditions, lack of moisture and poor soil, and it does not stand being planted in the usual city park any better than either one of its parents. As a shade tree outside of urban limits it is not objectionable. An excellent use of it is made in an estate near Boston, Mass. Closely planted specimens shade the walks that surround open lawns and, thriving in good soil, furnish a wealth of cool greenery. This, in my opinion, is the best employ that can be made of *Tilia flaccida*, which indicates how limited is its usefulness.

In *Tilia flaccida* the characters of *Tilia americana* and of *Tilia platyphyllos* are blended to perfection. Persons who did not know of the existence of this tree described it to me effectively as a "funny" *Tilia platy-*

phyllos and as an "odd" *Tilia americana*, and they were right either way. The fruits are borne in large crops and ripen, which is not the rule with hybrid lindens; they are thick-shelled, of course, and not prominently ribbed. The flowers lack the inner row of stunted petals (staminodes, as they are called by botanists) that is characteristic of the American and silver lindens, but on the whole are larger and less open than those of *Tilia platyphyllos*. The last season's growth cannot be certainly distinguished in wintertime from that of *Tilia americana*. The leaf, which is about five inches broad on the average, is not so hairy as that of *Tilia platyphyllos*. Its texture is peculiar and unlike the texture of either one of the parents of the hybrid. The veins are sharply etched, often outlined by dark green margins within the blade, quite evident if seen against light.

Tilia floribunda, or flowering linden, is the hybrid of *Tilia americana* with *Tilia cordata*. It is also known as *Tilia Spaethii* and *Tilia flavescens*. As it occurs in cultivation it is a quite variable tree, its forms possessing a wide range of individual characters and uneven horticultural merit. The plant cultivated in several nurseries under the name of *Tilia Spaethii* has comparatively large and somewhat coarse leaves, with characters that are intermediate between those of the parents. A better form, in my opinion, and one which is unfortunately seldom seen in cultivation, has characters of foliage and last year's growth which much resemble those of large-leaved forms of the red linden. I have already noticed that it is nearly impossible to describe hybrids in such a way that every tree agrees with a standard description. The identification of *Tilia floribunda* is fit matter for a specialist who takes up each case on its own merits. As the safest character of determination I may suggest the flower cluster. So far as I have seen, the flower cluster of *Tilia floribunda* takes its characters in equal measure from *Tilia americana* and *Tilia cordata*. The cluster itself is far longer and

broader than the cluster of *Tilia cordata*, but much slenderer than the cluster of *Tilia americana*. The individual flower, which may or not have more or less well developed staminodes, still retains the delicacy and the open spread of the blossom of *Tilia cordata*, but is larger than that of this species. To my knowledge, few seeds attain maturity. Some efforts have been made to push the sale of *Tilia Spaethii*. I have not yet formed a conclusive opinion that this form of *Tilia floribunda* is best, and I do not see special reasons why *Tilia Spaethii* should be preferred to the red and the common linden. We all know too little in this country of the rare form that resembles the red linden, but this seems to me to be the most promising form of the group of hybrids that have originated from the cross-fertilization of *Tilia americana* and *Tilia cordata*.

Tilia euchlora, or glossy linden, is well known, easily procured in the trade and strongly recommended by certain of its sponsors. Unlike *Tilia floribunda* and *Tilia Moltkei*, it is fairly well standardized so that the name, if correctly applied, assures the delivery of a tree with well defined characters. City conditions the glossy linden does not stand. It lingers on whenever it is improperly used and is a sorry tree, indeed, that badly defoliates, does not grow and openly seems to tell the world that it is being mistreated. What *Tilia euchlora* requires, as most lindens do, is a rich, well watered and deep soil. Planted in this kind of soil, *Tilia euchlora* grows to be a rather narrowly pyramidal or columnar tree, with a pleasing shiny foliage and a habit on the whole unmistakably of its own.

In *Tilia euchlora* often appears a character that is worth noticing because it also appears in hybrids other than *tilia*. The leaf, instead of being evenly outspread and of the same texture throughout, seems to cave in and to be "pouchy" here and there. To put it in plain words, if the leaves of the parents of the hybrids have unequal texture, as the case is with *Tilia euchlora*, it seems that the

blending of textures in the offspring is often only partly successful. The veins may not jibe perfectly well; the blade crumples up here and there and does not look pleasing at all. Leaves of this nature occur frequently in hybrid *malus*, *sorbus*, *pyrus*, *quercus*, etc., and constitute, in my opinion, a sufficient reason why these hybrids are not altogether commendable, especially for city use. City conditions are trying to most leaves and wreck in short order the clumsy textures found in the leaves of these hybrids.

The glossy linden has flower clusters that suggest those of *Tilia cordata*, but are longer and more widely spreading. Few seeds ripen. The leaf in its texture somewhat suggests the American linden and has characteristic brushlike tufts of hairs—like those of *Tilia platyphyllos*—at the meeting point of all the veins toward the petiole. The winter colors of the twig are usually bright, light green and purplish. The bud is long and pointed. Quite characteristic of *Tilia euchlora* is the light ashen bark that suggests the bark of *Tilia platyphyllos*. The color, however, is lighter in *Tilia euchlora*, and the characters of leaf, fruit and flower are unlike in the two lindens, with the exception of the tufts of hairs at the foot of the blade near the petiole.

Tilia euchlora is reputed to be a hybrid of *Tilia cordata* with some form of *Tilia rubra*. In some cases I have seen it sold under the names *Tilia caucasica* and *Tilia dasystyla*, which are obviously erroneous.

TULIP DISPLAY GARDEN.

The Garden Shop, Inc., which operates a nursery at 4819 Mission road, Kansas City, Kan., has been developing a tulip garden, which this year was so strikingly beautiful as to be outstanding even in such a place of notable gardens as Greater Kansas City.

As the accompanying illustration shows, the planting was in formal beds, the whole requiring about 5,500 bulbs. The beds in the background were filled with tulips of standard varieties, which are carried in stock in autumn, while in the foreground appear the rarer varieties, some of which are as yet unnamed and not for sale at any price. In all, about eighty different varieties were displayed, covering the entire price range.

Note the overhead lights. They were used for the eight nights of the show proper during the time that the tulips were in full bloom, though there were many interested spectators both before and after that time, as the garden showed color for over a month.

During the show everyone who entered the garden was handed a folder, which contained a complete list of the tulips with the class, variety and price, and a statement that ten per cent reduction would be given on orders placed at that time for autumn delivery. No soliciting other than this was done, however, as the object throughout was to create good will for the firm by providing a beautiful display free to all,

rather than to emphasize the commercial aspect. Admiring and appreciative comment has led the company to believe that, as an æsthetic contribution of indirect benefit to the firm, the show was a success.

CITY MANAGERS HELP US.

Another boon to nurserymen is predicted in the recently announced campaign for the city manager form of government in the city of Chicago, according to the research department of the Chicago city manager committee behind the movement.

"Statistics prove that those cities governed under the city manager plan devote far more attention to city planning and adornment of their parkways with trees and shrubbery than the cities yet under the older type of government," Harry Woodward, chairman of the research division of the committee recently told an interested group of adherents.

City planning, he said, was one of the outstanding improvements that the city manager form of government brought to the 465 cities now operating in the United States and Canada under the plan.

Active effort now is being made to secure permissive legislation at the forthcoming special session of the Illinois state legislature, enabling citizens of Chicago to vote upon the proposition of city manager. A referendum will be necessary to establish this form of government in Chicago. A campaign both for funds and to establish an organization in the voting precincts is now under way.



Tulip Display That Brought Many Visitors to Nursery of Garden Shop, Inc.

Plants for Wall Gardens

Fifth and Final of a Series of Articles on the Better Subjects for Garden Feature Now Attracting Public Interest—By C. W. Wood

Potentilla is a good example of the more or less rigid rule that a large genus of plants is apt to be made up of many weeds and a few good garden plants. It is rather hard to draw the line between the two divisions, however, for some of the weeds are beautiful plants, as witness the ubiquitous silver weed, *P. Anserina*, and deserve a place in gardens under certain conditions. Space restrictions call for some quite fine sifting, though, if this series on wall plants is to be brought to a close in this issue, and so only the best of the readily available kinds will be mentioned.

Perhaps the cinquefoil of wall proportions with the greatest amount of publicity back of it is *P. nitida*. Speaking for conditions in eastern United States, it is also about the poorest if the gardener expects to enjoy flowers, because it will not bloom there one year out of ten and then only in a half-hearted way. It must bloom under some conditions, however, for seeds are not hard to get. Even without flowers the plant is worth growing for its beautiful silvered foliage alone and that is what I keep it for, growing it in a northward-facing wall with the hope that conditions there will induce it to give an occasional deep pink strawberry-like flower. It is not hard to grow and would be an outstanding plant in sections where yearly blooming is a part of its performance.

If I were to name my favorite wall cinquefoil, I think I should pick *P. fragiformis*, which appears occasionally in lists and usually as *P. flagelliformis*. It looks much like a strawberry with silky velvet leaves held close to the ground and adorns itself with large yellow flowers during the last half of May and most of June. It, with the better forms of *P. villosa*, in which the leaves become silky and the stems bearing golden blooms are shortened to three or four inches instead of the foot which is mentioned in literature, forms a team of beauties for a sunny wall and will make one forget that *P. nitida* is so wayward in her behavior.

All the foregoing leaves *P.*

Tonguei out of consideration, and gardeners call it the best of the small cinquefoils. I could heartily subscribe to the statement, too, if I had nothing to do except enjoy the plants after someone else had propagated them at the ridiculously low price one sometimes has to meet—one sometimes wonders if all the material sold as *P. Tonguei* at present competitive prices is really that plant. Perhaps I am dumb, but I should certainly starve if I had to live from the propagation of the plant at the prices often quoted on it. As it grows here it never sets seeds; in fact, I doubt if it ever does, for it is a mule. To complicate matters, all the stems are blooming wood and will not root under any kind of treatment I have been able to give them. All that is left is division, which is not an easy matter with the root system of this cinquefoil. The only feasible plan that I have ever found is to use a safety razor blade, shearing off parts of the crown with as much as possible of the taproot. The real intent of this space-taking discussion has been to start an argument with propagators who may have a better plan. Let us hear from you in the columns of the American Nurseryman.

Saxifrages have a bad reputation among American gardeners, much of which is not deserved. Many of them, to be sure, are not for careless gardeners, and a few at least are quite impossible under eastern conditions, but the genus supplies us many good wall plants. Among the latter are to be numbered some of the mossies, including the following: *S. decipiens* and its numerous varieties and hybrids, *S. pedemontana*, *S. trifurcata* and others. Here in the north we get along with these mossies in an easy, friendly way, using them in all sunny and partly shaded situations that are not too dry, but still are well drained. Where the summers are hot, they would no doubt be best in a north wall. They may be endlessly multiplied by division, from cuttings or seeds.

But the wall plants par excellence among the saxifrages are to be found

in the incrustated section, of which *S. Aizoon* and its numerous offspring are well known examples. There is no plant in the incrustated kinds, so far as I have gone with them, that is really hard to grow. All they ask is a sunny, well drained situation, preferably in a wall where their roots have a cool run among the rocks. They would no doubt suffer in a southward-facing wall in hot climates, for I notice that they get quite well fried here during a hot summer if some provision has not been made to get water to the roots, but there is no trouble on that score in an east or north wall and none at all if the soil is kept fairly moist. There is a great deal of beauty here, much of it being unknown to the general run of gardeners, and practically all of it is available at the cost of little effort. Space will not be taken at this time to go into detail regarding the long list of kinds which appear in specialists' gardens, because a separate article will be devoted to that subject later. They are mentioned now merely to get them included in this list of wall plants.

Scabiosa is composed for the most part of border plants which are of no interest to us in the present inquiry, but it has at least two brilliant exceptions and perhaps others which I have not found. One of these, *S. graminifolia*, is a gift from the gods for the gardener with a dry wall to clothe and little time to care for it. It makes tufts of beautiful silvered foliage, ornamental enough in themselves to delight the most jaded gardener, but it is really spectacular when a number of 10-inch stems appear, in June, carrying large heads of pretty lavender blue pin-cushions. Another little charmer, *S. lucida*, which I had from the eastern Alps once, lacks the silveriness of the first-mentioned and the flowers are much smaller, if that is of any consequence, but it makes up for lack of size by the number produced and a longer blooming period. It is said by some to flower during May and June, but my notes indicate a flush season in June and scattering bloom—enough for good effect, the notes

say—from then until frost. The flowers are rosy-lilac on stems from six to twelve inches high. Both kinds are most accommodating plants, asking for no more than sun and a meager dry soil, and are propagated from seeds.

There was a complete account of the cultivated scutellarias in these columns last year, and so this genus need not be considered at this time, except to point out that most of the low-growing kinds which one is apt to find in lists make admirable wall plants for sun or light shade. Their habit of flowering at midsummer, many of them in July and August, makes them especially precious and their ease of culture should endear them to all busy gardeners.

Sedum is too broad a subject to be covered in this series and, as it is proposed to offer sometime during the summer an account of the genus as it appears in gardens, it will be passed by now with the admonition to look upon any stonecrop as a likely candidate for a position in the dry, sunny wall.

I have a notion that houseleeks are not properly appreciated by gardeners, perhaps because the always present *Sempervivum tectorum* has caused the sophisticates to think of the entire genus as too plebeian to receive their notice, and further because plant growers have peddled too many worthless kinds just because there was a temporary demand for them. Of the more than 300 kinds in my garden, which were assembled for study, perhaps not more than one-tenth are worthy of perpetuation for garden adornment. If growers would concentrate on the really worth-while kinds, there is little doubt that the houseleek would again find favor, for there is no better wall plant. The best advice to nurserymen who are interested in this genus is to visit an establishment which specializes in these plants and make personal selection of the more colorful kinds, depending little upon the specific name, for that usually means nothing.

The sea lavenders (*statice* of florists and *limonium* of botanists) are usually thought of in the role of cut flowers, especially in the dried state for winter use, but the genus actually contains some splendid wall ornaments. A few of the small members, including *S. bellidifolia*, *S. globulariæ-folia*, *S. minuta* and *S. oleæfolia*, are

exactly fitted, by their small rosettes of radical leaves and 1-inch to 6-inch arching stems of flowers, from blue to violet in the species named, to adorn a sunny wall, which they will do with grace. They are not always hardy in northern Michigan, although I had the first and the third of the ones named for years and grew them on a commercial scale for several seasons. They are easily propagated from seeds, the only reliable means of increase that I know about.

Most of the thymes are good wall plants, but they are too well known to need extended comment. Their naming is in an awful state of con-



L. R. Casey.

fusion, however, and needs critical study before it is safe to buy by name.

Tunica Saxifraga is often suggested as a wall plant and would, because of its pretty tufts of foliage and masses of pink stars from spring until autumn, be a commendable subject were it not such a pest of a seeder. It is hardly fair to a gardener, however, to sell him such a pest unless he is advised as to the consequences. There is a double-flowered form which never produces seeds and therefore has not that fault, but it is short-lived and has to be renewed often from cuttings.

Thus comes to a close, with a few genera mentioned for later treatment, including veronica which will receive special notice in a separate article, our short series of wall plants. As stated in the beginning, this is a phase of gardening which has had all too little attention on this side of the Atlantic. It is hoped that the few comments

made here will help to awaken a lively interest in the subject, which will eventually lead to a fertile field of plant sales.

L. R. CASEY.

The interest in the nursery business gained when he sold stock to pay his college expenses brought L. R. Casey into the trade in 1926, after he had taught as principal of high schools for six years. He established the Goldsboro Nursery, at Goldsboro, N. C., with about one-half acre of stock, mostly boxwood, which he had propagated while teaching. From that small beginning, the nursery has grown to about fifteen acres of stock, chiefly boxwood and roses. He has been quite successful with roses and grows about 25,000 a year. Forty-three years old, he feels a greater attachment to nursery work as time passes. He has been active in the affairs of the North Carolina Nurserymen's Association and served a year as president, being elected to that office in July, 1936.

TWO NEW RASPBERRIES.

Two new red raspberries have been developed in Washington to take the place of Cuthbert because of its habit of winter killing in the western part of the state. Washington and Tahoma are the names given the two varieties chosen from among 10,284 hybrids developed between 1929 and 1937 at the western Washington experiment station, Puyallup, and the Washington agricultural experiment station, Pullman. The hybridizing was done under the direction of C. D. Schwartze. Cuthbert winterkills in that section because of the short rest period of the plant.

Washington, a cross between Cuthbert and Lloyd George, produces berries that are sweet and delicately flavored, lacking the slight bitterness sometimes noticed in Cuthbert.

Tahoma was produced by hybridizing Lloyd George and Latham. The flavor is sour, but rich and good.

Stock is being distributed for trial purposes, at a nominal charge, by the western Washington experiment station, Puyallup. The limited stock available is supplied without restriction as to use, propagation or future sale of plants except that coöperation is requested in preserving the names that have been chosen for the new varieties.

Noted Speakers for Convention

*Further Program Announcements for Annual Meeting
of American Association of Nurserymen, July 19 to 21*

The finishing touches are being put on the program for the convention of the American Association of Nurserymen with the arrival of Secretary Richard P. White from Washington, D. C., this week to confer with the members of the local arrangements committee at Detroit. "The program is shaping up wonderfully well," reports Mr. White. One more speaker definitely set for a place on the program, whom everyone will wish to hear, is W. J. Cameron, director of public relations of the Ford Motor Co. Those who have listened to the Ford symphony orchestra on Sunday evenings are acquainted with the clear thought and accurate expression of which Mr. Cameron is capable, from his short intermission talks on that radio hour. His place on the program is set for 11 a. m., July 19, at the opening business session of the convention.

Congressman Earl C. Michener, Adrian, Mich., is another excellent speaker to appear, as was announced in the June 1 issue, as were addresses by Evert Kincaid, zone land planting consultant of the Federal Housing Administration, and W. H. Brokaw, extension director in the college of agriculture of the University of Nebraska.

Another definite feature is a talk on "Rules, Regulations and Specifica-

tions of Government Bids," by a representative of the procurement division of the Treasury Department, Washington, D. C. Other speakers for whom tentative arrangements have been made will add still further to the interest and value of the convention program.

The local arrangements committee at Detroit has a program of entertainment well mapped out, as announced in earlier issues. A contract has been made for the boat trip on Monday, July 18, a welcome day of quiet and rest after the trip to Greenfield Village on Sunday, where so much of interest is to be seen that a day of activity is certain. As a place of rest and recreation during the convention days, the Italian room of the Book-Cadillac hotel will appear as an "Aquatic Garden," providing a rendezvous for members. Surrounding a beautiful pool and fountain with surprise features, tables will be arranged. These are reserved by members for the duration of the convention, to meet their friends, affording the advantages provided by the customary display booths at earlier conventions and following the "Packing Shed" and "Cold Storage Cellar" at the Cincinnati and Chicago gatherings respectively.

Progress toward completion of the new form of organization is reported by Secretary Richard P. White. Recent applications for charters have come from the state of Kansas and from a group in northern Alabama. The Texas application is expected shortly, and a southern chapter is planned for the territory not now covered by state chapters in the south. It is indicated that the two Dakotas will join with the Minnesota chapter. With these organization steps completed, chapters will have been formed to cover the membership throughout the country before the convention, so that the board of governors may function at Detroit as a thoroughly representative body.

New members are constantly being added to the association, nine more names appearing in the May news-letter of the association.

Definite progress will be reported at the Detroit convention by the committee to study existing state inspection and quarantine laws, appointed by the executive committee at the January meeting. The committee, consisting of Lee McClain, Knoxville, Tenn.; Paul Stark, Louisiana, Mo.; Lester C. Lovett, Little Silver, N. J.; Harold S. Welch, Shendoah, Ia., and Ray D. Hartman, San Jose, Cal., met May 31 at Knoxville, Tenn., with the executive committees of the national and southern plant quarantine boards. President Edward L. Baker, Fort Worth, Tex.; Albert F. Meehan, Dresher, Pa., chairman of the quarantine committee, and Henry B. Chase, Chase, Ala., of the executive committee, were likewise in attendance. The outcome of such conferences is expected to be a uniform state inspection law, the adoption of which will remove some of the barriers to interstate plant shipments now imposed by state quarantine regulations.

BARCELONA and DuChilly are the main commercial varieties of filberts grown in the northwest. Both are self-sterile.

HOW many times has the automobile salesman telephoned you since he sold you that last car? And how many times have you made contact with the customer whose job was of comparable size?



Earl C. Michener.



William J. Cameron.

Planting Tourist Courts

New Group of Prospects which May Become Important Landscape Customers of Nurserymen

The increasing spread of tourist courts, or cabin camps, for the accommodation of traveling motorists adds another considerable group to nurserymen's prospects for landscape plantings. So the arguments that may be advanced in favor of planting such courts should be of interest. They were presented in a talk by Torben Rasmussen, manager of the Corpus Christi office of the Griffing Nurseries, before the tourist court owners' short course at Corpus Christi, Tex. Further comments were included in the talk with special reference to planting problems in that locality, on account of the soil, climate and wind. To meet such problems he recommended the consultation of a local nurseryman both with regard to planting and the subsequent care. The arguments in favor of such planting are equally effective in other localities, and in this regard he said:

Tourist courts, as a rule, are located at the very approach to the city. Therefore, it should be realized by you owners of these courts that a great responsibility rests on your shoulders. You are holding the key to not only what impression the tourist will get of your city, but, also, what impression he will get of your court. So from a commercial standpoint of direct interest to you, it is important that a glance at your court from within a moving automobile gives the tourist a good impression. This will make him stop and you have, in all probability, won a new patron. If accommodated and treated right, he will come back to you on his next trip to this city and while away he will mention the name of your court, whenever he is talking about his trip, and believe me, a satisfied tourist is a good booster.

Last summer, my wife and I took a four weeks' vacation. Traveling by automobile, we went through sixteen states, covering about 8,000 miles. We made all our overnight stops in tourist courts. Interested in knowing what feature about a tourist court was the main attraction to the average tourist, I always let my wife choose the place to stop. I decided afterward that in nine cases out of ten she preferred to stop at courts where trees and shrubs either grew naturally or had been planted to give shade and add life and color to the place, which otherwise would have been lacking. Sometimes those courts did not come up to expectations in accommodations. But our first impression had been good; so we were willing to sacrifice a little of our own comfort. On several occasions, we stopped in the afternoon, much earlier than we had planned, attracted by a beautifully landscaped court and afraid that if we passed it we should not find one like it before the day was over.

Often nature has been a great benefac-

tor to a man building a tourist court, by furnishing the natural setting, including large trees, grassy slopes or a small stream emptying into a natural pool. Here only a finishing touch is needed to make the picture perfect, and it will draw the eyes of the tourist, weary after a strenuous day on the road, as an oasis draws a desert traveler.

Therefore, if you are planning to build a tourist court, bear in mind that the outward beauty of your place is what draws the tourist. Instead of using every square inch of ground for utilities, leaving no room for plants at all, it would be well to leave out a cabin or two to afford enough room to make an attractive planting at the entrance to your court. In addition, a center attractive planting inside the court will help break the monotony when looking out the cabin windows, the type of attraction to be governed by the space available. But keep in mind that the entrance attraction is by far the most important of the two and is the one which reflects on the city in general.

I have noticed several tourist courts where the emphasis has been laid on the inside of the court, with quite elaborate and pleasing arrangements of shrubs and flowers, but the entrance sadly neglected. In my opinion, that is the same as hanging a beautiful picture face toward the wall.

In too many instances, no thought at all has been given to the beautification of the courts, these being planned to hold the largest number of cabins possible, with no room left for plant material. I can understand that under the present circumstances with a decided shortage of houses to accommodate the fast-growing population of this city, it is a temptation, with a limited plot of ground, to build as many cabins as you possibly can find space for, and I do not doubt that at the present time the cabins return the volume of business they were intended to. But the main point is this: Was it the good impression the tourist got of your court at the first glance that made him stop, or had he tried several other courts first, but finding no vacancies, he was forced to come to yours? If the latter is the case, what will happen when building increases to conform with the growth of the population, which I feel sure it will sooner or later? Will your cabins draw tourists and give you the return you expected, or will the court next to yours draw more than its share of tourists because it is nicer-looking?

Perhaps, a check on a number of vacancies you have on the average for the year will disclose that one or two cabins less will still leave a sufficient number to take care of the volume of business. Would it not be advisable to remove the surplus to make room for beautification?

THE commercial production of filberts in the United States is largely confined to western Washington and western Oregon because of the adaptability of certain important varieties to the climate of these districts.

FOR GOLDEN GATE FAIR.

With the first tree ceremoniously planted, the mass transplanting program that will turn Treasure island into a bower of beauty for the Golden Gate International Exposition in 1939 will continue through the summer and autumn.

John McLaren, creator of Golden Gate park, in San Francisco, and horticultural advisor to the western world's fair, was honored at the ceremonial planting. The tree was a 28-ton California oak, *Quercus agrifolia*, thirty feet high, grown from an acorn planted by Mr. McLaren in 1893. It was installed in the south gardens on Treasure island.

More than 4,000 trees, in addition to countless shrubs and plants, will follow this pioneer to the island, which has been reclaimed from the depths of the salty harbor within the last two years. More than a billion gallons of salty water have been pumped from the depths of the new fill; rainfall has replaced it with fresh water, driving harmful salts beyond the reach of the roots, and top loam will complete the preparation.

A contract for approximately 100,000 cubic yards of topsoil has been let. The fine loam, according to Julius L. Girod, chief of the exposition's division of horticulture, will be brought on barges from Bethel island, in the rich alluvial delta region at the head of San Francisco bay.

Large trees will remain boxed, chemically fed, during the 288 days of the fair. The topsoil will be used as insulation around and beneath the boxes, and spread from eight to twenty-four inches deep to serve as plant beds. About \$1,500,000 will be expended on natural beauty on Treasure island, to give the 1939 fair a California garden setting on a huge scale.

Seventy palm trees up to sixty-five feet high will lead the eye toward the pinnacles of towers on Treasure island, thirty-six eucalypti range to forty-five feet in height, a hundred Canary island palms are nearly as tall, and other lofty specimens include scores of California redwoods, laurels and madroñas. More than 300 olive trees will line a single avenue, and 750 dwarf orange trees will surround the central Tower of the Sun.

Bids have been called for the tremendous job of moving these trees, shrubs and vines from their concen-

tration points in the San Francisco bay area. Larger specimens will make the journey by truck, crossing to Treasure island on barges or via the San Francisco-Oakland bay bridge. Railway flatcars and barges will handle many of the smaller plantings.

Meanwhile the pumps continue to hum on Treasure island, still drawing salty water from the saturated fill through more than 200 well points and preparing acre after acre for field planting. In the areas pumped, the water has been drawn down to five feet above sea level, from its old line at seven to twelve feet above the tides. An abnormally heavy winter rainfall was materially helpful in leaching the sandy fill.

LANDSCAPED BILLBOARD.

Operating one of the largest nurseries in Indianapolis, Ind., as well as one of the foremost flower shops there, A. Wiegand Sons Co. has combined an advertisement of the two in the landscaped billboard pictured on this page. It is sixty feet long and located at Thirty-eighth and Meridian streets, one of the busiest corners of Indianapolis, as well as one of the most expensive for billboard rental.

The sign has the appearance of a show window. Behind the glass can be seen a painted drop representing the front of a residence, with a lawn landscaped with evergreens, a specialty of Wiegand's, the plants being actually set before the drop. The base of the sign has a foundation planting, which unfortunately does not show to advantage, as the photograph was taken at night. Wiegand's is one of the oldest business firms in Indianapolis, being in its seventy-ninth year. It is operated by George and Homer Wiegand, sons of the founder, and the latter is a frequent attendant at nurserymen's conventions.

The nurseries are on Kessler boulevard, where traffic is heavy, and advantage is taken of this fact. An imposing rock garden is visible from the boulevard and attracts the attention of many motorists. A rose garden is another feature; this is floodlighted in the blooming season and has won much notice this month. Specimen evergreens are a specialty, primarily grown for the firm's landscape jobs.

BRONX ROSE COLLECTION.

With the opening June 12 of rose week at the New York Botanical Garden, Bronx park, New York city, the opportunity is presented of seeing at its best one of the most complete collections of roses in the country. More than 100 new varieties have been added this year, bringing the total number up to 800 different kinds. The garden contains about 8,000 individual rose plants, which have been contributed by Bobbink & Atkins, Rutherford, N. J.

Among the special beds containing novelties this year is a group of eighteen recently patented hybrid teas. There are in all 220 varieties of hybrid teas in the garden, about fifty of which have been introduced within the last year or two.

Hybrid perpetuals are a special feature this year, for there are 105 varieties being shown. Among the outstanding new hybrid perpetuals to be seen are Roger Lambelin, whose scalloped petals are edged with white; Ferdinand Pichard, with alternating stripes of red and pink; Louise Crette, like Frau Karl Druschke except that

the inner side of the petals is yellow, and Oskar Cordell, a fragrant bright carmine flower. Five years ago Bobbink & Atkins planted Arrillaga beside the entrance to the rose garden, and it is now one of the handsomest plants on the grounds, bearing incomparable numbers of enormous vivid pink flowers.

The climbing roses at the garden make an uncommon display, as there are ninety-seven different kinds to be seen. The border of polyanthas also contains many varieties, and there are, besides, other types and species of roses.

The excellent care which is given this garden the year around is credited for the thrifty growth and good health of all the plants. Beginning with deep preparation of the soil into which an abundance of humus is dug at plant time, the program includes: A heavy application of cow manure and bone meal in early spring; feeding with liquid manure in midsummer; cultivating the soil; spraying and dusting at regular intervals to keep mildew, aphids, black spot, canker and other troubles in check; applying acid phosphate in mid-July; ceasing the feeding and cultivating in time to allow thorough ripening for winter; suitable protection with mounds of soil when freezing weather comes; proper pruning at the right time for each type of plant; dormant cleanup sprays when needed.

A NEW Cornell bulletin on orchard grafting, E-387, shows how to get the best results from grafting, whether for young trees, for pollenizers or for the repair of winter damages. Single copies are available free from the New York State College of Agriculture, Ithaca, N. Y.



Real Plants in Front of Pictured House on Indianapolis Billboard with Plantings about Entire Sign.

Strawberries

RED STELE DISEASE.

To test the relative resistance of various varieties and seedlings to the red stele disease, an experimental strawberry plot is being conducted by the Virginia agricultural experiment station in cooperation with the United States Department of Agriculture. Discovered last year in the Del Mar Va peninsula by Dr. George M. Darrow and J. B. Demaree, this new disease is now appearing in Virginia strawberry fields.

Plants affected with red stele are stunted and die about the time the berries should ripen. If these plants are dug, most of the fine roots will be found missing and sections of the larger roots will have a red core. Soon after fruiting and during the summer the diseased plants die. The disease is caused by a fungus, which may be introduced into new land with diseased plants. It is most destructive on low, poorly drained, heavy soil.

It is not known how long the disease will live in the soil. Specialists urge that new plantings be selected from healthy fields and be planted in soil in which the disease has not been known to occur.

STRAWBERRY YIELD.

In spacing tests at the station farms at Mount Carmel and Windsor, Dr. Donald F. Jones, of the Connecticut agricultural experiment station, reports better yields when strawberry plants are set wider apart in the row than is the general practice.

Preliminary tests have shown that most of the Connecticut varieties will make a matted row of sufficient width when planted at three and one-half foot intervals. In the 1937 trials at Windsor, the plants were spaced two and one-half, three, three and one-half and four feet apart. The total yields for the four spacings were 59, 76, 87 and 63 quarts. While this experiment should be run over several years on different kinds of soil, it indicates that strawberries might be planted farther apart for better yield.

Especially promising commercial varieties in 1937 were Catskill and

Pathfinder, according to the tests. Although the yield of Catskill was slightly lower than Howard Premier, berries were larger and more attractive and the size was maintained better throughout the pickings.

For home gardens Dorsett and Fairfax are recommended. They are excellent in flavor when used immediately after picking, but seem to lose something when permitted to stand before eating. Another variety that deserves further trial as a home garden special is USDA 1773, which produces a large and excellent berry, according to Connecticut station tests. Three Connecticut-bred berries have been outstanding for several seasons. These are: Connecticut 143, 282 and 111.

STRAWBERRY DWARF.

It has been recognized for several years that there are two physiological strains of the strawberry dwarf nematode, *Aphelenchoides fragariae*. One is prevalent in the south and results in dwarfing of the plants during the hottest part of the summer, and the other is known in the Cape Cod district of Massachusetts. The symptoms of the latter appear during the cool early spring and become less evident, or entirely disappear as the season advances.

George M. Darrow and J. B. Demaree, writing on this subject in the Plant Disease Reporter, state they have suspected for the past year that the northern type of dwarf was present in the middle Atlantic states. In May, 1937, a small area in a Dorsett planting in a Delaware nursery was thought to be infested. In June of the same year, about five per cent of the plants in a commercial field of Catskill in New Jersey showed evidence of infestation. Both of these observations were made too late for definite diagnosis. March 29 to 31, 1938, many severely infested fields were found at Sanford, Va., and in the area around Salisbury, Fruitland and Pittsville, Md. The infestation was heaviest in the Catskill and Howard 17 (Premier) varieties, but was also severe in Dorsett and in one planting said to be Town King (properly Lupton). Ten of twenty-seven fields examined were found to be infested. In one field of Catskill set in 1937 with plants taken from four different sources, infestation was found in plants secured from three of the sources.

The symptoms at the end of March, 1938, were (1) killing of plants in the worst infestations, (2) killing of fruit buds in most of the infested plants, and (3) undeveloped, stunted, cupped, glossy, crinkled leaves sometimes slightly bronzed. At the end of May and in June, 1937, the affected plants (1)

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2 1/2 to 3 ft.	\$ 2.50	\$ 22.50	\$200.00
3 to 3 1/2 ft.	3.00	27.50	250.00
3 1/2 to 4 ft.	4.50	40.00
4 to 4 1/2 ft.	5.50	50.00
4 1/2 to 5 ft.	7.00	65.00
5 to 6 ft.	12.00	100.00
6 to 7 ft.	17.50	150.00

5 at 10 rate—25 at 100 rate.

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were more vigorous than others, (2) were making runners earlier than unaffected plants, (3) had usually no fruit clusters, and (4) had dark, glossier foliage than unaffected plants.

PHLOX BIFIDA.

In rock gardens much use is made of moss phlox, which, except for some of the forms of compact growth, often spreads so that it smothers its neighbors. Another species, long known, but little seen in gardens, the cleft phlox, *Phlox bifida*, forms a close clump, not creeping at all. Stephen F. Hamblin, of the Lexington (Mass.) Botanic Garden, describes it in the June issue of *Horticulture*:

"The base is woody, but the plant is scarcely an evergreen. The leaves are narrow, but not prickly to touch. The flower stalks rise some six inches or more tall, taller than those of the moss phlox, making a symmetrical mound. The flowers have each petal deeply split, forming a sort of 10-pointed star, lavender, pale blue or white. The period of bloom is the same as that of the moss phlox.

"This plant is native from Indiana to Missouri, preferring dry soils in full sun and taking all the punishment that can be given to moss phlox. It will thrive in any rock garden that grows yellow alyssum, and the soft, pale blue flowers are a pleasant contrast to the many vivid colors of early May. In a wall garden in full sun it is also happy, making drooping rounded mounds of flowers, but the roots stay strictly in place.

"In many ways this is the most useful species of dwarf phlox for our rock plantings. Few dealers offer it yet, and it must be had from dealers in collected plants. It is easily propagated by cuttings or division in summer. It is perfectly hardy to any cold as well as summer heat, but it must have full sun. Seedlings seem to give darker color forms, and some day this plant will be more beloved than the best forms of moss phlox."

EARLY DAY LILIES BLOOM.

About twenty-five early-flowering varieties of day lilies are now in excellent bloom in the public display garden at the rear of the museum building at the New York Botanical

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Complete Nursery Supply

The Storrs & Harrison Company
PAINESVILLE, OHIO

Garden, Bronx park, New York city. All are clearly labeled with their correct names, affording comparative studies of the different kinds. There are also several thousand seedlings in the display garden. The climax of the season will come in late June, when a hundred named varieties of *hemerocallis* will be in full bloom. Some kinds will continue through July, and selections made from hybrids developed at the garden may also be seen in flower in August and even in September.

BEANS NOT CONTROL.

Growing castor beans to eliminate grasshopper damage to crops does not work, despite some publicity to the contrary, says Dr. Carl J. Drake, of Iowa State College, Ames.

The conclusion that castor beans are of no value in grasshopper control came as a result of an experi-

ment at Iowa State College conducted over a period of three months, which involved at least 500 grasshoppers and several varieties of castor beans.

The use of poison bran mash still remains the only known effective method of controlling grasshoppers, Dr. Drake says.

He warns that castor beans are poisonous to animals and humans. A single bean has proved fatal to a small child and a few beans have been known to kill a horse.

IF THE various forms of aphid, or plant life, are more abundant than usual on trees and shrubs in your locality, it is because cool weather has favored their development and has held back that of their natural enemies, such as lady beetles, grubs, maggots and four-winged parasites, which thrive under warmer conditions.

Obtaining F. H. A. Loans

Amendments to Housing Act Facilitates Borrowing for Improving Home Grounds

Nurserymen and landscape firms are interested in recent amendments to the national housing act by which financing of property improvements is facilitated through providing insurance to approved lending institutions against losses on loans for such purpose. To be eligible for a guaranteed loan, the improvements proposed must meet certain specifications. The building of new structures, as well as the improvement of old, either residential or business, comes under the provisions of the act.

One requirement is that the borrower own the property under consideration or have a lease that expires not less than six months after the loan matures. The loan must be made before July 1, 1939. Other regulations governing the loans fall into three classes, depending upon the express purpose for which the money is used.

Class 1 represents loans up to \$10,000 to repair, alter or improve an existing structure or the property in connection with it. It is important to note that this includes landscaping and grading of grounds. Not only can a nurseryman improve his own property, but he can interest clients in seeking funds for the improvement of their grounds by planting.

Alterations and Improvements.

The types of alterations or improvements included under class 1 are intended to be made on homes, apartment houses, hotels, hospitals, colleges, churches, industrial establishments, etc. The governing regulation is that the improvement or addition made shall become a permanent part of the real estate, thus increasing its value. Improvements which are removable or temporary, such as barns, garages, repairs to vehicles, etc., are not eligible, although heating systems, watering systems, a new roof, driveways, fences, lighting or plumbing systems, wells, etc., are.

Installations of machinery such as refrigerators, stoves, presses, display cases, etc., or items of a nature generally considered trade fixtures, are not eligible. For instance, an individual can obtain an insured loan for putting a stronger floor in a building to hold heavy machinery, but cannot secure money for the purchase of that machinery. Also, the structure to be repaired or improved must exist as a completed building, used or ready for use.

Separate Properties.

The amount of the loan, \$10,000, is advanced on the basis of a single piece of property. A man who owns two separate properties may obtain up to \$10,000 on each of them, providing they are clearly separate. Separate properties are not always easy to define. Two buildings on lots which are not contiguous, both of which are owned by one person, are clearly separate. Two contiguous lots upon which stand entirely separate buildings devoted to entirely different purposes are usually considered separate, but if both plots are held under one deed and are the

subject of a single tax assessment, they might not be separate in the meaning of the regulations. Whenever this question arises, it would be best for the lending institution to obtain a ruling from the Federal Housing Administration at Washington, D. C.

Property improved or repaired by a loan insured under title 1 of the original act (approved June 27, 1934, and subsequently amended) prior to its expiration April 1, 1937, will be eligible for a new loan not in excess of \$10,000 under the present act. If, however, title to or right of occupancy under a lease to the property is still held by the original borrower and a balance is owing on the original insured obligation, the payments thereon must be up to date.

The borrower must also establish credit responsibility satisfactory to the lending institution and prior approval of the administrator must be secured if the total advance of credit to such borrower is in excess of \$2,500.

New Structures.

Classes 2 and 3 represent loans for financing new structures amounting to \$2,500 or less. Class 2 covers structures exclusive of residential dwellings, and class 3, residences.

Under class 2, the types of structures eligible are barns, garages, service buildings, wayside stands, tourist cabins, gas stations and various commercial or industrial buildings. The loan does not include the cost of the equipment used in operation of the business occupying the structure. For instance, a loan may be used to erect a gas station and may include a heating system, but cannot include the pumps, hoists, greasing equipment, etc. It is not permissible to apply the money for the purchase of land or the purchase of existing structures.

A loan to supplement a prior obligation executed in connection with the building of the new structure is not eligible. In other words, if the builder were able to obtain a mortgage loan of \$3,000 and planned to build a structure to cost \$5,500 when completed, the addi-

tional amount of \$2,500 would not be insurable under a class 2 loan. However, if the builder had \$500 cash, which did not represent the proceeds of a prior obligation executed in connection with the building of the new structure, and wished to erect a structure to cost \$3,000, a class 2 loan would be eligible. An eligible loan may include the cost of architectural and engineering service, but not credit appraisals, title searches, etc., if in addition to the maximum charge for non-residential structure loans.

Building Must Be Complete.

The proceeds of a class 2 loan must be expended for the erection of a building that will be structurally finished and ready for occupancy or use at the completion of the work. More than one new structure may be built on a single piece of property, but the total expended may not exceed \$2,500 for any one piece of property. No portion of the loan may be used for demolishing existing structures to make room for a new one, but the erection of a new structure on the old foundation is permissible.

The question may arise as to the eligibility of the loan, the proceeds of which will be used to improve an existing structure and also to erect a new structure. Inasmuch as the act specifically states that a loan to erect a new structure may not exceed \$2,500, it follows that not more than this amount of the total loan may be so expended. For example, an eligible borrower who desires to repair and remodel his home at an approximate cost of \$3,000 and at the same time erect a garage to cost \$500, may do so with one loan of \$3,500. In no case, however, may that portion of the total loan expended on the cost of erecting the new structure exceed \$2,500.

Class 2 loans must mature within five years and thirty-two days from the date of the note, and the maximum permissible finance charge may not be in excess of an amount equivalent to \$5 discount per \$100 original face amount of a one-year note payable in equal monthly installments.

Residences.

Under class 3, loans of \$2,500 or less may be insured if the new structure, used wholly or in part as a residence, conforms with all applicable local laws, ordinances and regulations, including codes, zoning rules and health regula-

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We also collect the Small Native Peach Pits so extensively used.

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tions. There are other regulations which must be complied with, which have to do with the minimum land area, as related to public water supply and sewage disposal facilities, etc. The dwelling shall have a minimum of 360 square feet. The foundations must be of masonry pier or wall construction, carried below the prevailing frost line in the district. No wood construction shall be less than eighteen inches from the ground in unexcavated portions, and eight inches on the exterior.

The minimum land area for any one dwelling shall be 4,000 square feet where public water supply and public sewer are available, except in those areas where there is seasonal occupancy, such as summer camps, etc., or where the existing lots have not been platted prior to the date of these regulations with smaller areas, in which case there is no minimum area. Where public water supply but private sewage system is used, the minimum area is 7,500 square feet. This may be reduced when the installation of the private sewage disposal system is in conformance with state regulations and is approved by the local health officer, but in no case shall the area be less than 4,000 square feet.

Where neither public water supply nor sewer is available, the minimum area is 20,000 square feet. This may be reduced when the installation of the private well and sewage system is in accordance with state rulings and is approved by the local health officer, but in no event shall the area be less than 5,000 square feet.

All habitable rooms must have windows. When public water supply is available, connections shall be made to the public water main; otherwise, a well or natural spring shall be used. When public sewers are available, a bathroom with running water shall be constructed and water shall be piped and connected with all fixtures and the kitchen sink. When public water supply, but not public sewer, is available, running water shall be piped to a bathroom and kitchen sink and a cesspool or septic tank shall be made. Outdoor toilets will not be permitted on lots of less than 20,000 square feet.

Fire Insurance.

Fire insurance coverage must be obtained in an amount equal to at least the unpaid principal on the loan and must name the lending institution as beneficiary. In the event of loss or damage, the proceeds of such insurance shall be payable to the lending institution and shall be applied to the reduction of the unpaid balance of the loan. If the borrower wishes to obtain the use of such proceeds to repair or reconstruct the structure damaged, the lending institution may release the proceeds to the borrower.

The cost of such insurance may be in addition to the maximum finance charge, but in no event may such cost be included in the net proceeds advanced to the borrower. In areas where it is impossible to obtain full fire insurance coverage, the maximum allowed in that area will suffice.

It is not required that lending institutions obtain collateral security in the case of loans having a maximum final maturity of five years and thirty-two days, but if the maturity is in excess of that, collateral security must be obtained in the form of a first mortgage or first deed of trust covering the prop-

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<i>Acer palmatum ashi-beni</i> ...	10	100
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<i>Thuja occ. pyramidalis</i> ...	2.25	20.00
<i>Thuja occ. Rosenthalii</i> ...	2.25	20.00
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<i>Juniperus virginiana</i> ...	100	1000
3 to 6 ins.	\$3.00	\$25.00
<i>Pinus sylvestris</i> , 4 to 6 ins.	2.00	15.00
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<i>Thuja orientalis</i> , 3 to 6 ins.	1.50	10.00
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erty improved by the new structure. Such mortgage or deed of trust shall be recorded in accordance with applicable laws of the jurisdiction and shall represent a first lien upon the new structure and the property improved thereby, except that in the case of institutions publicly supervised and prohibited by law from advancing an amount equal to the full amount insurable under title 1, the requirement regarding collateral security may be disregarded and the taking of such security is left to the discretion of the insured institution.

Applications.

All applications for loans under classes 2 and 3 must be submitted to the local insuring office of the Federal Housing Administration for prior approval as to location of the structure. This is to avoid the placing of small houses in locations surrounded by higher-priced dwellings, injuring the value of the other properties.

To determine whether a loan to finance the building of a new structure to be used wholly or in part for residential purposes is eligible, the lending institution must obtain a certificate of conformance from the borrower, approved as to form or supplied by the administrator. This certificate must state the necessary information from which the lending institution can determine whether there is conformity to the required conditions. The institution may rely upon this signed certificate and need not make an investigation unless it has reason to doubt any of the statements made.

Class 3 loans are similar to class 2 loans in that the funds may not be used to complete a structure already begun, to buy furnishings, stoves, land, etc.

New dwelling loans of the class 3 type have a final maturity of not in excess of seven years and thirty-two days. The maximum finance charge may not be in excess of an amount equivalent to a \$3.50 discount per \$100 original face amount of a one-year note payable in equal monthly installments.

WISCONSIN TAX RULING.

The Wisconsin industrial commission in a recent communication calls attention to the difference between the exemptions under the Wisconsin unemployment compensation act and the federal social security act, the term "farm laborer" under the Wisconsin law being less inclusive than the term "agricultural labor" under the federal law. Under the Wisconsin act only those persons actually engaged in tilling the soil and performing services in the operation of a farm in the commonly accepted definition of the word are exempt. Persons working in a greenhouse or grading, boxing or packaging farm products are not exempt from the unemployment compensation tax under the Wisconsin ruling. The text of the communication follows:

There is a difference between exemptions permitted under the federal social security act and under the Wisconsin unemployment compensation act. Section 811 (b) (1) and section 907 (c) (1) of the federal social security act exempt from the definition of employment "agricultural labor." Section 801.02 (e) 1. Wisconsin statutes of 1935, and section 108.02 (5) (g) 1. Wisconsin statutes of 1937, exempt from consideration as employment subject to coverage under the Wisconsin unemployment compensation act "employment as a farm laborer." The term "agricultural labor" as used in the federal social security act is more inclusive than is the term "farm laborer" as used in the Wisconsin unemployment compensation act, and in the bureau of internal revenue ruling 224-RST-208 this fact is noted in the term "agricultural labor" to include persons employed

by the growers of flowers. The term "farm laborer" as used in the Wisconsin unemployment compensation act has a much narrower application, and in its rule 10 pertaining thereto, the Wisconsin industrial commission provided that "only those persons employed on a farm in customary types of farm work or employed and paid directly by a farmer in transporting his raw produce shall be deemed farm laborers." In view of the foregoing and as a result of a number of hearings before the Wisconsin industrial commission relative to employee status under chapter 108 of Wisconsin statutes of persons employed by growers of nursery stock, it is understood that the term "farm laborer" shall apply only to individuals engaged in tilling the soil and raising the crops and performing services incidental to the operation of a farm in the commonly accepted definition of the word. The term is not to apply to persons engaged in specialized forms of agricultural employment, as performing services in a greenhouse or grading, boxing or packaging products for trade, or selling products to the trade, or keeping records of such activities. It has been permitted for the florists to consider as farm labor only persons who may be engaged in an extensive planting and cultivation of flowers in the fields.

PEONY SHOW AT SHENANDOAH.

A regional peony show under the auspices of the American Peony Society was held at Shenandoah, Ia., June 4 and 5, in connection with the annual Shenandoah flower festival. There were entries from four states and from Canada. J. A. Bongers, Ottumwa, Ia., regional vice-president of the peony society, superintended the show. All entries were competitive, and professional growers dominated the exhibits in the open classes.

The Inter-State Nurseries, Hamburg, Ia., made the largest and most comprehensive display, carrying off most of the awards. They won the silver medal for a display of eighty to 100 varieties, one bloom each; the sweepstakes award for the best bloom in the show, with the new Hans Sass white double, Evening Star; the award for the best red bloom in the show, with Grover Cleveland, and a silver cup for the most outstanding exhibit, a large display of Sass seedlings.

Other winners were the Henry Field Seed Co. and the Earl E. May Seed Co., both of Shenandoah, Ia.; the Lockhart

Peony Gardens, Des Moines, Ia.; J. A. Bongers, Ottumwa, Ia.; L. E. Foster, York, Neb.; Otto Koerth, Fredericksburg, Ia., and Jack Bernstein, Lincoln, Neb.

Two displays of new seedlings were made, with four awards to Mr. Bonger. Honorable mention went to Hans Sass, Elkhorn, Neb., and a first-class certificate was awarded Dr. Brethour, Toronto, Ont., for the variety Blanche Elie, a white Jules Elie.

Edward Auten, Jr., Princeville, Ill., made a small display of late double seedlings and received honorable mention for No. 1568, a tall, stiff-stemmed pink, and a first-class certificate for No. 2258, a medium-size fragrant flesh pink.

Edward Auten, Jr.

The Rotary Club of Milton and Free-water, Ore., recently elected Bert Miller, of the Milton Nursery Co., Milton, president for the coming year. Mr. and Mrs. Miller are traveling in the east and plan to attend the convention of the A. A. N. at Detroit in July.

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6 to 8 feet.....	5.50	50.00
8 to 10 feet.....	7.50	70.00
10 to 12 feet.....	10.00	90.00

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IOWA**• **General Line Nursery Stock**• **Evergreens**• **Alpine Currant**• **Hardy Phlox**• **Shade Trees****Newest Plant Introductions****of Prof. N. E. Hansen****Our Specialty****Hansen Bush Cherry****New Hardy Apricots****Red Flowering Crabs****Red Flesh Fruits****And many others****Write us and see us at the
convention.****Carl A. Hansen Nursery
Brookings, S. Dak.****MOUNT ARBOR NURSERIES****E. S. Welch Est. 1875 Shenandoah, Iowa****A COMPLETE LINE OF GENERAL
NURSERY STOCK—ASK FOR TRADE LIST****Send us your WANT LIST for quotations
"One of America's Foremost Nurseries"****HILL'S EVERGREENS****Complete assortment of lining-out sizes
Also larger grades for landscaping
Send for our wholesale catalogue****D. HILL NURSERY CO.****EVERGREEN SPECIALISTS****Largest Growers in America****Box 402 DUNDEE, ILLINOIS****JEWELL Wholesale****Hardy Minnesota-grown
Nursery Stock and Liners****THE JEWELL NURSERY CO.****POUCH N****Lake City, Minnesota****THE WESTMINSTER NURSERIES****WESTMINSTER, MARYLAND****Fruit and Shade Trees, Evergreens, Shrubbery,
all sizes up to 7 ft. California Privet, 3 to 7
ft., in grades. Heather, assorted, 8 to 18-in.
clumps. Evergreen Privet and Barberry. Perennials,
etc.****We have a very complete line.
Trade list sent on request.****MANETTI****Dormant Buds****Multiflora Japonica, rooted cuttings.****Quince stocks and seedlings.****ENSCHEDER NURSERY****Hillsboro, Ore.****PORTLAND CLUB MEETS.**

The Portland Nursery Club met at Portland, Ore., the evening of June 8, for dinner and a discussion of nursery problems. A few of the nurserymen had already departed on eastern trips, but there was a good attendance.

Guests of the evening were Fred W. May and Ray Beam, of the May Nursery Co., Yakima, Wash., and Harry Pearcey, Salem, Ore. They were visitors in Portland for the thirtieth annual rose festival, held from June 8 to 11.

Mr. May reported that things were looking pretty well in Yakima and vicinity, with a good stand of all crops.

Mr. Pearcey, who is especially interested in filbert nut growing, talked briefly about the filbert tariff. The filbert growers are putting up a fight to hold the tariff where it is and raise it if possible.

All crops seem to be coming along quite well in the nurseries of Portland, but there is a general need of moisture. It was generally believed that the nurseries are cleaner today than they were a year ago; the stock is twenty to twenty-five per cent farther along. Difficulties that came up in the past have made the nurserymen wiser, and with the state college aiding the nurserymen, many problems of the future may be solved. The interest now is in developing a program of control which prevents instead of just cures.

SOUTHWESTERN NOTES.

John M. Rohan, Omaha, Neb., is planning to move his nursery business to Denver, Colo. He has canvassed eastern Colorado, southern Nebraska and western Kansas extensively in recent years and finds it desirable to be closer to this territory.

A. F. Lake, president of the Shenandoah Nurseries, Shenandoah, Ia., is taking a vacation motor trip of several weeks in the east, accompanied by Mrs. Lake and their two daughters.

A 2-day school for amateur gardeners was held at the Kansas State Agricultural College, Manhattan, June 14 and 15. All meetings were held in recreation center, Anderson hall. Francis K. McGinnis, extension landscape specialist, Oklahoma A. and M. College, the guest speaker, gave two talks, "Some Plant Materials Not Commonly Used" and "Design of the Small Home Grounds." Other talks and demonstrations were given of value to the homeowner interested in improving the appearance of his home grounds. There were rose and wild flower exhibits and tours of the college gardens and campus. Special emphasis was placed on ornamental plants and flowers adapted to Kansas, insects and diseases common in gardens and lawn problems.

R. C. Chase, of the Chase Nursery Co., Chase, Ala., who had a reservation on a cargo steamer for a vacation trip to Europe, has had to change his plans, as the ship has had to tie up for lack of freight. He now expects to drive to Vancouver and sail from there to Honolulu. H. H. Chase, his son, who was married May 21, has gone to England on his honeymoon.

Z. M. DICKEY, Dinuba, Cal., reports business much improved in central California the past season, because of the erection of many new homes and increased landscaping of old ones.

FALL 1938**ELM, American, Moline and Vase,
up to 4 ins. All transplants.****MAPLE, Norway, up to 3½ ins.
Transplants, extra select, spaced
7x7 ft.****POPLAR, Lombardy, up to 2 ins.****WILLOWS, Thurlow, up to 3 ins.****BARBERRY, Thunbergii, up to 2
to 3 ft.****SPIRÆA, Vanhouttei, up to 5 to
6 ft.****APPLE, 2-year.****CHERRY, 1-year.****PEACH.****All of above items can be sup-
plied in carload lots.****Send for list on many other
items.****C. M. HOBBS & SONS, INC.
Bridgeport, Indiana****Largest Nursery in Indiana. Est. 1875.****CHIEF and LATHAM
RASPBERRIES
ANDREWS NURSERY
FARIBAULT, MINN.****Wholesale Growers of****Grapevines, Currants,
Gooseberries, Blackberries
and Raspberries****Let us quote on your requirements****FOSTER NURSERY COMPANY, INC.
60 Orchard St. Fredonia, N. Y.****PEACH PITS****Our Pits Compare Favorably
With the Best****HOGANSVILLE NURSERIES
HOGANSVILLE, GEORGIA****SMALL FRUIT PLANTS****Evergreens — Shrubs****Lining-out Stock****Send for Complete Trade List****SCARFF'S NURSERIES****New Carlisle, O.****COMPLETE STOCK****Lining-out Evergreens
and Shrubs****Write for list.****SCOTCH GROVE NURSERY
Scotch Grove, Iowa****Please Mention
THE AMERICAN NURSERYMAN
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Coming Events

SOUTHERNERS' MEETING.

Scheduled for August 10 and 11, the annual convention of the Southern Nurserymen's Association will be held at the Atlanta Biltmore hotel, Atlanta, Ga. W. L. Monroe, Atlanta, is chairman of the local arrangements committee. Donald Hastings, Atlanta, was recently appointed chairman of the program committee by President C. M. Smith, Concord, Ga.

NORTH CAROLINA SHORT COURSE.

The North Carolina State College will offer its first short course for nurserymen at Raleigh June 16 to 18 to which all nurserymen in the state are cordially invited. The program planned is a varied one, to meet the many interests of the trade. A registration fee of \$2 will be charged to help defray the expenses. Meetings will be held in the Y. M. C. A. auditorium, the schedule of addresses and other features being as follows, with the speakers being from the college except where otherwise indicated:

JUNE 16, 8:40 A. M.
Welcome, by Col. J. W. Harrelson, dean of administration.

Greetings from the school of agriculture, by Dean L. O. Schaub, director of extension and acting director of research.

"Soil Sterilization and Composting," by Prof. G. O. Randall, associate horticulturist.

"Chewing Insects and Their Control," by Dr. Z. P. Metcalf, entomologist.

"Root Stocks for Fruit Trees," by Dr. F. E. Gardner, senior pomologist, U. S. D. A.

JUNE 16, 2 P. M.
"Root Diseases of Nursery Stock," by Dr. R. F. Poole, plant pathologist.

"Water Relations of Plants—Loss of Water by Plants," by Dr. D. B. Anderson, plant physiologist.

"New and Noteworthy Fruits and Ornamentals," by Prof. M. E. Gardner, horticulturist.

JUNE 16, 8 P. M.
"Color Photography As an Aid in Advertising," by Prof. J. G. Weaver, assistant horticulturist.

JUNE 17, 8 A. M.
"Sucking Insects and Their Control," by Dr. Z. P. Metcalf.

"Root Stock Problems Confronting the Nurseryman and Orchardist," by Dr. F. E. Gardner.

"Foliage Diseases of Nursery Stock," by Dr. R. F. Poole.

"Water Relations of Plants—Absorption and Movement of Water in Plants," by Dr. D. B. Anderson.

JUNE 17, 12 NOON.
"Sampling and Testing of Soils," by Prof. J. R. Piland, assistant soil chemist.

"Care and Management of Shade Trees," by H. C. Wilson, of the Davey Tree Expert Co., Kent, O.

"Plant Defects Associated with Soil Deficiencies," by Prof. L. G. Willis, soil chemist.

JUNE 18, 8 A. M.
"Fertilization of Nursery Stock," by Dr. F. E. Gardner.

Plant clinic, conducted by the short course staff. All nurserymen are urged to bring specimens and an attempt will be made to diagnose all troubles.

PLANS FOR TEXAS MEET.

A meeting of the executive committee of the Texas Association of Nurserymen, called by President R. P. Verhalen, was held at the Driskell hotel, Austin, May 28. Those who attended were R. P. Verhalen, Scottsville; J. M. Ramsey, Austin; C. C. Mayhew, Sherman; Oscar Gray, Arlington; Edward Teas, Houston, and Harvey Mosty, Kerrville.

Important matters for discussion included social security as pertaining to nurserymen, store tax, state and highway work, state nurseries, nursery inspection laws, and some proposed changes to be made in the association's by-laws at the September meeting, which will be held at Austin September 7 and 8.

If plans can be worked out as outlined, the association will have at the September meeting one of the finest programs ever put on by the Texas Association of Nurserymen. High-class entertainment, which will be snappy, will be enjoyed by everyone present. In addition, an educational program highly instructive and of great value to all interested in the nursery business is scheduled. This is to be a departure from the common routine of nurserymen's conventions; it promises to be radically different from any other convention. It is hoped by the executive committee to have a large attendance, and everyone is invited and urged to attend. Plan to do so and you will not be disappointed.

SEATTLE CONVENTION PLANS.

A joint convention will be held July 6 to 8 at Seattle, Wash., by the Pacific Coast Association of Nurserymen and the Washington State Nurserymen's Association, the latter holding a statewide gathering for the first time.

The first session, Wednesday, July 6, will be opened at 9:30 a. m. with an address of welcome by Mayor Langlie and a response by R. D. Hartman, San Jose, Cal. H. M. Eddie will deliver his address as president of the Pacific Coast Association of Nurserymen, and W. R. Dimm will report as secretary and treasurer. Committees of the Pacific Coast association will render reports and a general business session will follow.

At noon will be held a get-together luncheon at the New Washington hotel, to which all nurserymen are invited.

At the afternoon session the American Association of Nurserymen will be the subject of talks by Avery H. Steinmetz, Portland, Ore., member of the A. A. N. executive committee; Chet G. Marshall, Arlington, Neb., vice-president, and C. H. Andrews, Faribault, Minn., member of the membership committee. Quarantine 37 will be discussed by J. I. Griner, supervisor of horticulture for the state of Washington, and by Mr. Reynolds. In the evening will be heard a talk on credits.

At the morning session July 7 will be held a discussion of the future of the Pacific Coast Association of Nurserymen. Labor problems will be given consideration. A talk will be heard on the University of Washington arboretum. Landscape problems will be discussed.

In the afternoon will be held a plant clinic, with the following expert staff:

IRIS ARISTOCRATS

The cream of late introductions—new varieties everyone wants

FRIEDA MOHR, MIDGARD, PLUIE D'OR, SANTA BARBARA, SOUV. DE MME. GAUDICHAT, DUKE OF BEDFORD, PRINCESS BEATRICE, AMBER, AMBASSADEUR, DR. CHARLES MAYO

A list of champions, aren't they? Yet priced with the lowest!

10 of each, 100 in all, correctly labeled, \$2.95

100 of each, only \$24.00
August delivery. Write for special advance prices on Hardy Lilies, Muscari, Hemerocallis for autumn delivery

Frank M. Richard, Jr.

P. O. Box 363 Fort Collins, Colo.

Dr. Glen A. Huber, plant pathologist, and Dr. Breakey, entomologist at the western Washington experiment station; Dr. L. C. Wheating, research professor of soils at Washington State College; Dr. John Milbrath, plant pathologist at Oregon State College; W. B. Courtney, nematologist of the United States Department of Agriculture, and J. I. Griner, state supervisor of horticulture.

After the banquet in the evening, Walter R. Dimm will give an illustrated talk on his trip abroad.

At the Friday morning session freight problems and selling northwest products will be discussed. In the afternoon will be held the election of officers of each organization.

COMING EVENTS.

June 15 and 16, Oklahoma State Nurserymen's Association, summer meeting, Hotel Tulsa, Tulsa.

June 16, Southern California Horticultural Institute, annual meeting, Hotel Mayfair, Los Angeles.

June 18 and 19, American Peony Society, national show, boy's vocational school field house, Lansing, Mich.

June 21 and 22, American Rose Society, summer meeting, Hartford, Conn.

June 30, Iowa Nurserymen's Association, summer meeting, Shenandoah.

July 6 to 8, Pacific Coast Association of Nurserymen, annual convention, Seattle, Wash.

July 7 and 8, North Carolina Association of Nurserymen, annual meeting, Asheville.

July 19 to 21, American Association of Nurserymen, annual convention, Book-Cadillac hotel, Detroit, Mich.

July 31 to August 2, Virginia Nurserymen's Association, annual meeting, Virginia Polytechnic Institute, Blacksburg.

August 10 and 11, Southern Nurserymen's Association, annual meeting, Atlanta Biltmore hotel, Atlanta, Ga.

August 30 to September 1, annual National Shade Tree Conference, Coronado hotel, St. Louis, Mo.

September 7 and 8, Texas Association of Nurserymen, annual meeting, Driskell hotel, Austin.

September 28 to 30, California Nurserymen's Association, annual meeting, Hotel Roosevelt, Hollywood.

September 30 to October 2, annual Texas rose festival, Tyler.

ORIENTAL POPPIES

Fine field-grown roots, propagated from root divisions. Ready in late July.

Many fine varieties, including:

Joyce—Fine cerise red

Jeanne Mawson—Clear geranium pink

Beauty of Levermore—Fine red

Mrs. Perry—Large pink

Olympia—Double salmon

Perry's White

Wurtembergia—Large red

Lulu Neely—Oxblood red

Orange King—Large orange

Scarlet Beauty—Large scarlet.

Write for prices and complete list.

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PEONIES

All types, including Tree Peonies

The Cottage Gardens
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Oregon-grown ROSEBUSHES

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New Rose TEXAS CENTENNIAL (Red Hoover)

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DIXIE ROSE NURSERY
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**HARDY
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LOCAL MAHALEB SEED

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NORTH DAKOTA SEEDS

Silver Cedar
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Cleaned seed

Bad Lands' Pentstemon collection, four
beautiful species. Other beautiful peren-
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E. C. MORAN Medora
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FRUIT TREE SEEDLINGS

Western-Grown Per 1000
Apple, 3/16-in. \$12.00
French Pear, 3/16-in. 12.00
Myrabalan Plum, 3/16-in. 12.00
These are well graded, sturdy, healthy seedlings,
on which we do our own budding and are sure to
please. Supply limited.

C. R. BURR & COMPANY, INC.
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HERBS

Pot-grown plants; over a hundred varieties.
Dried Herbs for Flavoring and Fragrance.
Other plants of unusual character and
with the charm of old-time gardens.

Write for Catalogue

Weathered Oak Herb Farm, Inc.
BRADLEY HILLS, BETHESDA, MARYLAND

TREE CONFERENCE AT ST. LOUIS.

For the first time in the history of
the National Shade Tree Conference,
the next regular meeting, the fourteenth
annual affair, will be held at St. Louis,
Mo., at the Coronado hotel, August 30 to
September 1.

This conference should be of interest
to everyone connected with the growing
and preservation of valuable and neces-
sary trees; nurserymen, landscape men,
park and cemetery superintendents and
lovers of trees who possibly can be
urged to attend. An interesting and in-
structive program has been arranged.

St. Louis, being centrally located, is
easily reached at little expense. All
past meetings have been held in the
east, which made it somewhat prohibi-
tive for the western delegates.

The local committee is arranging to
make the stay of visitors pleasant, as
well as profitable and educational.

August P. Beilmann,
Member, Local Committee.

ROSE DAY AT CORNELL.

R. Marion Hatton, Harrisburg, Pa.,
secretary of the American Rose Society,
and E. S. Boerner, head of the research
department of Jackson & Perkins Co.,
Newark, N. Y., are among the authori-
ties prominent in rose culture scheduled
to speak in Ithaca, N. Y., at the Cor-
nell rose day Saturday, June 25. Cornell
rose day is being sponsored by the
Cornell test gardens, recently design-
ated as the official trial ground of the
American Rose Society. Its purpose is
to acquaint members of the society and
all others interested with the newest
types of rose varieties, as well as the
best methods of rose culture.

R. Marion Hatton will speak on
"Gardening with Roses" and will dis-
cuss the most effective uses of roses in
small and large gardens. E. S. Boerner
will speak on "Rose Varieties Go
Modern," presenting information about
recent introductions and novelties.

Visitors will inspect the gardens and
have an opportunity to see the experi-
mental projects now in progress. R. C.
Allen, of the floriculture department
at Cornell University, Ithaca, will dis-
cuss "Experiments in Rose Growing,"
giving results of experiments to date.

Dr. L. M. Massey, of the plant
pathology department at the university
and plant pathologist of the American
Rose Society, will speak on "Healthier
Roses," using his experiments in the
control of rose diseases as a basis for
discussion. Dr. W. E. Blauvelt, of the
entomology department at the univer-
sity, who specializes in the study of
insects of ornamental plants, will dis-
cuss "Routing Rose Insects." An open
forum will give those attending the
opportunity to gain any special informa-
tion they wish from the specialists in
their respective fields.

MRS. CLARENCE M. STARK, 77, mother
of Governor Lloyd Stark of Missouri,
fell at her home in Louisiana, Mo., June 1
and suffered fractures of her left hip and
arm.

IN CLOSING its fiscal year May 29, the
Stark Bros. Nurseries & Orchards Co.,
Louisiana, Mo., reported a substantial
increase in business compared with the
previous year. Bonus checks totaling
\$36,000 were given to the 700 employees.
Last Christmas, \$23,000 was given in
bonuses.

Portland Wholesale Nursery Co.

306 S. E. 12th Avenue
Portland, Oregon

To the Trade Only

A complete line of
Nursery Stock and
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Catalogue sent on request.

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FAIRVIEW, OREGON

Wholesale Only

ROSES

Send us your list of wants

Fruit Tree Seedlings
Flowering Ornamental Trees
Shade Trees

Grown right and packed right

Combination carloads to eastern distributing
points save you on freight.

MILTON NURSERY CO.

Milton, Oregon

"Pioneer Nursery of the Northwest"

Fruit, Shade, Flowering and Orna-
mental Trees, Fruit Tree and Chinese
Elm Seedlings.

Car lot advantages to all points east.
Send for our Trade List.

ORENCO NURSERY CO.

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Wholesale Growers

Fruit, Shade, Flowering Ornamental
Trees, Fruit-tree Seedlings, Roses, Etc.

Very complete line of quality stock
Catalogue sent on request.

PACIFIC COAST NURSERY

1436 N. E. Second Ave. PORTLAND, ORE.

Largest Fruit Tree Seedling Growers
in America.

We accept growing contracts for 3 to 5 years.
Quality stock. References on request.

John Holmason, Prop.



EVERGREENS

For Seventy-four years
growers of Quality Evergreens
Lining-out Stock a Specialty

Write for Trade List

EVERGREEN NURSERY CO.

Established 1864 : STURGEON BAY, WIS.

GOODRICH

Rubber Bud Strips

Write for prices and free samples

The Willis Nursery Co.

OTTAWA, KAN.

New Books and Bulletins

YARDS INTO GARDENS.

"Gardening for the Small Place," a little book written by the late Leonard Barron, covers a field of prime interest to many city folk at least, whose planting activities outdoors are likely to be limited by rather restricted property bounds. Doubleday, Doran & Co. are the publishers. The theme of the book is making the yard a garden. The garden plan, the garden budget, soil pointers and seasonal activities—all receive attention. A concluding chapter, "Gardening Indoors," expands the possibilities of the small place. Specific data appear on bulbs, including methods for determining the number of bulbs needed for beds of different shapes. Other helpful notes are given on lawns, keeping potted plants, planting and transplanting, protecting evergreens and guarding against attacks of insects and disease.

The book is indexed and contains thirteen line drawings and a half-tone frontispiece. It has ninety-five pages and is cloth-bound. The price is \$1.

"MODERN DAHLIAS."

Some gardeners have always liked and grown dahlias, some have had dahlias thrust upon them and others have achieved dahlia enthusiasm. The last-named group should be greatly enlarged if a copy of "Modern Dahlias," by J. Louis Roberts, reaches their attention. The book incorporates the enthusiasm of one dahlia grower, reduces the dahlia success formula to a minimum and provides guideposts in the terms of an A B C of modern cultural data presented mostly in short declarative sentences.

The success of the book lies much in its atmosphere of reciting personal experience. The author is never hesitant to state that such and such an idea is his own and may be subject to further testing. Equally obvious, however, is his thorough familiarity with the latest information relating to dahlias as released by other growers and dahlia specialists on university staffs. It is said the book was written at the suggestion of the late Leonard Barron, who also edited it. The publishers are Doubleday, Doran & Co.

The author has been growing dahlias for twenty-five years and planned this modern manual to cover completely the following phases of present-day dahlia culture: Soil, time of planting, location, staking, division of roots, fertilizers, watering, insects, diseases, pruning, propagation, disbranching and disbudding, cloth houses, storage, exhibiting and judging. Varying conditions of soil, climate and methods of growing have been considered so as to be adaptable to the problems of dahlia growers in all parts of the country.

Special mention should be made of the chapter on "Cloth Houses," a topic which few books in this field have covered so completely as "Modern Dahlias." Included in the data are lists of materials and erection plans and pointers, with some helpful drawings. Disbudding is well handled. Exhibiting blooms is another topic on which some splendid pointers are provided. Useful are comments on dahlia troubles, in which the

damage is described and suggestion is made as to what pest or disease to suspect. An extensive chapter on fertilizing contains a vast quantity of information, which may be almost too much to digest readily. Growth without soil is touched on.

Sixteen line drawings illustrate the text, which is of 211 pages, including an index of topics. The book is cloth-bound and sells for \$2 per copy, post-paid.

BULLETINS RECEIVED.

For the instruction of small operators, the United States Department of Agriculture has issued an 8-page pamphlet, leaflet 155, "Growing Nursery Stock of Southern Pines," by M. A. Huberman, associate silviculturist in the forest service, and a similar bulletin, leaflet 156, "Harvesting and Selling Seed of Southern Pines," by Philip C. Wakeley, silviculturist, southern forest experiment station, covering in detail the propagation of slash, loblolly, longleaf and shortleaf pine for reforestation in the south. The problems of a large nursery, it is noted, are covered in the department's technical bulletin 492, "Artificial Reforestation in the Southern Pine Region."

"A Program for Shade Trees in Oklahoma," by K. Starr Chester, H. J. Harper, R. O. Monosmith and F. A. Fenton, of the agricultural experiment station, Oklahoma A. and M. College, Stillwater. Bulletin No. 234 is packed with valuable information on the selection, planting, care and repair of trees with reference to Oklahoma conditions, the data being equally applicable to other sections in the great plains region.

HALF interest in the Milliken Nurseries, Claremont, Cal., was recently sold by Dan Milliken to Maurice Peairs, who has been associated with him for several months.

AT NEW YORK WORLD'S FAIR.

"Gardens on Parade" will be the name of the horticultural exhibition at the world's fair to be held at New York next year, opening April 30, 1939. The exhibition, which will include a building for shows and trade exhibits and a large number of gardens outdoors, will be operated by Hortus, Inc., a corporation formed by the New York Florists' Club, the Society of American Florists, the Horticultural Society of New York and other horticultural interests. A. M. Dauernheim, Wantagh, N. Y., past president of both the S. A. F. and the New York Florists' Club and member of the flower show committees of these organizations, is executive vice-president of the corporation and general manager of the exhibition. He will be assisted by John A. Servas, Chicago, who managed the horticultural exhibitions at A Century of Progress, Chicago, in 1933 and 1934.

Building and garden plans for the exhibition will be completed soon and construction is expected to start at the fairgrounds within the next few weeks. It has been reported that applications for trade space in the exhibition have been large and that allotment of spaces will be made soon. Florists, seedmen, nurserymen and allied tradesmen interested in space should make inquiries at once. The office of Hortus, Inc., is at 52 Vanderbilt avenue, New York.

TEXAS NOTES.

Mrs. Edward Teas, Houston, accompanied Mr. Teas to the executive committee meeting of the Texas Association of Nurserymen at Austin May 28.

Mrs. R. P. Verhalen and her boys accompanied Mr. Verhalen to Austin May 28. Mr. Verhalen attended the executive committee meeting of the Texas Association of Nurserymen and he and Mrs. Verhalen, before returning to their home in Scottsville, also attended the graduation exercises of St. Edward's College, where their son, Steve, received his degree.

Mrs. Harvey Mosty and daughters,

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ROSES OF THE WORLD IN COLOR

266 illustrations in full color! No such showing of roses in accurate color has ever before been made. The printing is superbly done and the color checked by actual comparison with the roses as they bloom in the author's own garden, where nearly 800 varieties of the world's best roses have been grown. There are 58 other pictures in black and white, and the index contains 557 descriptions.

By J. HORACE McFARLAND

President emeritus of the American Rose Society, editor of the American Rose Annual and author of several other books on roses. A master printer by profession, Dr. McFarland has developed accurate color printing to notable heights, and in this new book has applied with complete success the knowledge and experience he has gained in years of work with roses, with photography and with printing. The result is one of the most beautiful of recent garden books.

320 pages, bound in scarlet cloth, 6x9 inches

Price, \$3.75

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AMERICAN NURSERYMAN

508 S. Dearborn St.

Chicago, Ill.

Frances and Marie, Kerrville, accompanied Mr. Mosty to Austin May 28. Mr. Mosty attended the executive meeting of the Texas Association of Nurserymen.

REPORTS RECORD SEASON.

Maintaining their rapid progress of recent seasons, the Fairview Evergreen Nurseries, Fairview, Pa., reached another record volume this year, according to Charles W. Hetz, of F. C. Hetz & Sons, proprietors, who states:

"In spite of the fact that we were handicapped somewhat by shortage of salable materials, due to three previous consecutive seasons of heavy trade, we were able to increase our volume ten per cent over a year ago to an all-time high. Dealers and small growers in this section generally did a satisfactory business."

"We added another 40-acre farm and installed five acres additional overhead irrigation to enable us to meet increasing trade demands. A successful addition to equipment was a 2-row transplanter and a 2-row tractor cultivator unit, making a saving in both man power and horses."

"The season was advanced by weather conditions two to three weeks ahead of normal. Planting conditions have been ideal and transplanting got away for almost a perfect stand."

"Considerable purchase by the government of erosion and highway materials is anticipated for autumn."

ROSE REGISTRATIONS.

The American Rose Society's registration committee has approved applications for registration of the following roses. Notice of these registrations has been sent to rose organizations in foreign countries and trade papers. If no objections are raised before July 8, 1938, the registration of these names will become permanent as of that date.

Lily Pons. Hybrid tea. Originated by The Brownells, Little Compton, R. I. A seedling of Glenn Dale x Stargold. A vigorous plant, resistant to 10 degrees below zero, with 5½-inch flowers of forty petals. Pure yellow in the center, shading to nearly white on the outer petals. Moderately fragrant and claimed to be superior to all hybrid teas in intensity and continuity of florescence, with a longevity expectancy more than ten times that of the average hybrid tea.

Regina Elena. Hybrid tea. Discovered by Nicholas Grillo, Milldale, Conn., as a sport of Briarcliff. The plant is described as upright, with abundant and leathery foliage and profuse quantities of 4-inch flowers, with about fifty petals. It is said to be of better color, with larger, more double flowers, on longer and stronger stems than its parent.

Jewel. Hybrid tea. Discovered by Nicholas Grillo, Milldale, Conn., as a sport of Better Times. The plant is described as upright, with abundant and leathery foliage, and is said to be a profuse bloomer, with 5-inch flowers having forty petals. The color is velvety red. It is fragrant and is said to be more prolific than its parent, with flowers having larger petals.

Climbing Matador. Climbing hybrid tea. Discovered by the Western Rose Co., San Fernando, Cal., as a sport of the dwarf hybrid tea, Matador. Described as a strong climber, with flowers identical with those of its parent in every way.

Climbing Signora. Climbing hybrid tea. Discovered by the Western Rose Co., San Fernando, Cal., as a sport of Signora Piero Puricelli. It is described as a strong climber, producing flowers exactly the same as those of its parent.

Climbing Eclipse. Climbing hybrid tea. Discovered by the Western Rose Co., San Fernando, Cal., as a sport of Eclipse, and is described as a strong-growing climber, producing flowers exactly the same as those of its parent.

Climbing Mrs. Sam McGredy. Climbing hybrid tea. Discovered by the Western Rose Co., San Fernando, Cal., as a sport of Mrs. Sam McGredy. It is described as a strong-growing climber, with flowers exactly the same as those of its parent.

R. Marion Hatton, Sec'y.

In accordance with its annual custom, La Bar's Rhododendron Nursery, Stroudsburg, Pa., held open house Memorial day for visitors.

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THE firm of Lindley & Case has been organized at New Canaan, Conn., by William A. Lindley and Paul E. Case, to do nursery and landscaping work. Both Mr. Lindley and Mr. Case were associated with Outpost Nurseries, Inc., Ridgefield, at one time.

ARMSTRONG NURSERIES, Ontario, Cal., recently entertained representatives of the garden section of the Winnetka Women's Club with a tour of the nursery and a lecture on gardening. It was reported that some of the visitors traveled nearly 200 miles to attend the event.

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ALVIN H. FALK, Port Huron, Mich., reports that business in late spring was quite good and the outlook for fall planting is propitious. Stock in the fields looks extremely well, having received considerable rain.

THE will of Frank E. Conine, of the Conine Nursery Co., Stratford, Conn., who died April 27, was recently filed in court. His widow, Florence E. Conine, two sons and a daughter will share in the estate of \$100,000, exclusive of the Conine Nursery Co., which was transferred to Mr. Conine's sons in 1935.

BLISTER RUST QUARANTINE.

All restrictions on the interstate movement of 5-leaved pines except to points in two pine-growing regions in which the blister rust has not been found, one in the west and the other in the southeast, will be lifted, it was announced by the Secretary of Agriculture June 3, in a modification of the white-pine blister rust quarantine regulations, which becomes effective July 1.

An embargo is placed on the interstate movement of the 5-leaved pines into Arizona, Colorado, Nevada, New Mexico, Utah, Wyoming, part of California, Georgia, Kentucky, North Carolina, South Carolina and Tennessee, from states other than these eleven entire states and from ten northern California counties.

When the earlier blister rust quarantines were enacted and for several years thereafter, there were several additional regions with extensive areas of commercially valuable stands of 5-leaved pines in which the rust had not appeared. The restrictions in effect were designed to prevent the artificial spread of the disease into such regions, and the quarantines, first enacted over twenty years ago, have been effective in delaying the spread of the rust while control measures have been developed and applied.

The rust has now become established, however, in most of the commercially valuable pine-producing areas of the country. It has been found in twenty-five states. Owing to this condition and the fact that the disease can, under favorable conditions, spread naturally from pines to ribes for a distance of 150 miles or more, it is believed there is no biologically sound basis for continuing the former restrictions.

The currant and gooseberry shipping regulations also are revised. The extensive federal-state control work throughout the infected states is continued, and in order to protect accomplishments and to maintain sanitation zones around the valuable pine stands, the control-area permit requirement is extended to apply to shipments to twenty-three states. The requirements as to dormancy, defoliation and dipping of currant and gooseberry plants are continued in the case of shipments to the twelve pine-growing states to which pine shipments are prohibited. The embargo as to shipments of European black currants throughout the United States except into the twelve central states of Alabama, Arkansas, Florida, Kansas, Louisiana, Mississippi, Missouri, Nebraska, North Dakota, Oklahoma, South Dakota and Texas is continued unchanged.

CALIFORNIA NOTES.

Members of the Central California Nurserymen's Association are making an active campaign for new members. Those who bring in two new members or more by the July meeting have a chance at a reward for their efforts.

At the Malcolm & Callaghan nurseries, now located on Sepulveda boulevard, Van Nuys, a department devoted to pottery and ornamental gourds has been installed by Mrs. Mabel Callaghan. This firm has just completed landscaping on the Seton Miller home, Van Nuys, recently pictured in the rotogravure section of the Los Angeles Times. The work

covered complete plantings, including lawn, perennial garden and patios.

Bernhard Idso, of the Idso Perennial Gardens, Van Nuys, now has a beautiful specimen garden in full bloom. It is known as a cottage garden and includes many varieties of both perennials and annuals, to form a colorful example of the possibilities of such a planting. Mr. Idso's establishment attracts visitors, and many of his best orders come from folks who have stopped in to look around and have been given attention several times regardless of their failure to buy. It is Mr. Idso's belief that most potential gardeners need information and intelligent encouragement to become real customers.

INDIANAPOLIS, IND.

The second annual rose festival sponsored by Hillsdale Landscape & Nurseries Co. was held Sunday, June 5, at the nursery grounds. A feature of the festival was the crowning of the rose queen. Garden lovers have shown a spirit of coöperation in this event. A handsome trophy was presented by Alex Tuschinsky, proprietor of the nurseries, to the girl selected as queen. The Boy Scouts, Girl Scouts and Camp Fire Girls also participated. Swimming contests were held in the private swimming pool of Mr. Tuschinsky, whose residence adjoins the nursery. The gardens about the home, noted for their beauty, were thrown open to all visitors. Approximately 5,000 rose plants were in bloom. In addition, there was a profusion of annuals and perennials, as well as a large rock garden.

MILWAUKEE, WIS.

The Carl Gerlach Co. and the Schneider Nursery & Landscape Co. jointly were successful bidders June 6 for the landscape work on Milwaukee's new water purification plant, which occupies a 20-acre site of made land along the shore of Lake Michigan.

HARRY J. ROBERTS, of the Roberts Nursery Co., Dansville, N. Y., reports the season there has been exceptionally good for the growth of nursery stock, averaging about three weeks earlier than normal. Ample rain and plenty of sunshine are bringing stock right along.

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OBITUARY.

George M. Johnson.

One of the most popular members of the New England nursery trade died May 24 in the person of George M. Johnson, North Abington, Mass., who was for thirty-three years associated with the Bay State Nurseries, being particularly interested in the hardy herbaceous perennial department. Mr. Johnson, who was 54, had not been in robust health for the past two years, and a sudden heart attack was the cause of his death.

A native of Denmark, the deceased learned his trade in that country. Before becoming associated with the Bay State Nurseries he was for some time employed at the Bedford Nurseries when the late John Kirkegaard operated them. He was extremely well posted on hardy perennials and their culture and propagation.

At meetings of the Massachusetts Nurserymen's Association and the New England Nurserymen's Association, Mr. Johnson was always a keenly interested member. He was also active in the order of Odd Fellows. He leaves a widow and three sons. Funeral services were held May 26. There was a beautiful display of floral tributes which filled the chancel of the First Baptist church where services were held. Many members of the nursery trade were among those present, and practically the entire force of the Bay State Nurseries was in attendance, all business being suspended during that afternoon.

Otto W. Speidel.

Otto W. Speidel, forester for the city of Milwaukee, Wis., for the past twenty years, died May 25 at the age of 72.

Born in New York, Mr. Speidel decided to make horticulture his life-work at the age of 16. His education was obtained in Switzerland, where he studied landscape architecture for two years. Three years were spent in further study and training in Germany and France. At the Paris exposition in 1889, Mr. Speidel worked for the Japanese horticultural commission. Two years later he joined the staff of the horticultural commission for the Columbian exposition in Chicago.

At the close of the fair in 1893, he became assistant superintendent at Lincoln park, Chicago, which position he held until 1897. During the following years he planned and developed many private estates in northern Illinois and southern Wisconsin.

As city forester since 1918, Mr. Speidel also supervised the development of Milwaukee's parks. His last plans aimed to make Milwaukee a city of color at blossom time in the spring.

BUSINESS RECORDS.

Elmsford, N. Y.—The petition of Elmsford Nurseries, Inc., for permission to attempt a reorganization under section 77-B of the bankruptcy law was approved June 1 by Federal Judge Robert P. Patterson in United States District court at New York. Judge Patterson granted permission for the debtor to continue in possession and control of its business and set June 24 for the first hearing in the case. The company in filing its petition last week stated it expects to receive considerable money from the county of Westchester in payment for land needed for the widening and straightening of Saw Mill River road, and that this money will be sufficient to meet its pressing needs.

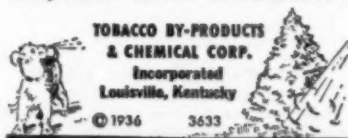
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In Big Nurseries, and in Small —**RIDGEFIELD, CONN.**

I have just read the article, "Moving Trees the Year Round," written by Mr. M. G. Copen of the Rock Creek Nurseries, which you published in your current issue.

Mr. Copen's article is the most practical and sensible that I have ever read on tree moving, and I believe it should be reprinted in not only all of the trade magazines, but in all publications read by people who have any interest in tree moving or having trees moved. We shall certainly see that all the department heads, foremen, and salesmen in our organization read it carefully, and will be very glad to file it for future reference.

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Maurice L. Condon, General Manager.

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Current issues tell of the notable entertainment and convention program that will attract nurserymen from all over the country next month. Good spring business has provided ample carfare. Attendance will be the biggest in years.

PRE-CONVENTION NUMBERS

July 1 :: :: July 15

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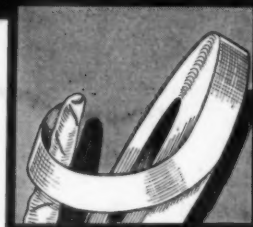
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JULY 1, 1938



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Sorting Out the Sedums

A. A. N. Convention Program

Charlie Chestnut on Propagating

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F. R. KILNER, Editor

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should be on hand one week earlier.

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"ON A FARM."

Nurserymen who have claimed exemption from the social security tax because they are employers of agricultural labor have been asked by the federal bureau of internal revenue to supply information to support their claim. The queries put to them have concerned the area of their premises, the use of the surrounding land and the proximity to the corporate limits of a municipality, among other items.

The bearing of those queries may be seen if one reads the statement from the bureau of internal revenue printed on another page of this issue under the heading "Greenhouses Not a Farm." This statement is in contrast with the belief generally in the minds of the trade.

Nurserymen and florists were generally satisfied that labor employed in the production of their crops should be exempt in every instance under the revised ruling promulgated last October. But now there seems to be a catch in it, hinging on the interpretation of the phrase "on a farm."

When is a farm not a farm? Is the answer to be, when it is of small size, or in a district where there are few other farms, or if it is within the corporate limits of a municipality? On such distinctions the differences of opinion will be so wide and varied that the betters on a horse race will seem unanimous in comparison.

While nurserymen may not be so much affected by the official interpretation of the words "on a farm" as are greenhouse operators, still

The Mirror of the Trade

there are many small nurseries not far from a business district and within the corporate limits of a town or village. The proprietors of such nurseries, in supporting their claim to exemption, must emphasize the character of their business, the fact that operations are conducted outdoors and are seasonal in character, being subject to the weather and other adversities just as farmers' operations are. The purposes of the legislators in Congress in exempting agricultural labor certainly should apply to nursery conditions regardless of the stand taken by the bureau of internal revenue as regards greenhouse operations.

HOME BUILDING.

Reports on residential construction contracts indicate that there will be a good deal of business for nurserymen in landscaping new homes in autumn.

June contracts are expected to show a gain of about ten per cent over the May total. In May such contracts were one per cent below the 1937 level. Last year June registered a gain of eleven per cent over May, and consequently contracts for residential building are continuing close to the 1937 level.

Activities of the F. H. A. also present a cheerful aspect, with mortgages selected for appraisal in May setting a new high record. Mortgages accepted for insurance were a trifle under the April total, but one-third more than in May a year ago. Mortgages for new homes are accounting for a steadily increasing proportion of the total business.

As there is normally a lag of four months or so between the letting of a contract and actual building operations, these homes should be ready for landscaping by autumn, indicating a volume of business for nurserymen comparable to that of the closing months of 1937.

HEMEROCALLIS WAU-BUN.

Interest in day lilies has increased measurably with the introduction of improved hybrid forms, and Wau-Bun is one of the newer sorts that should prove popular. A clump of this variety in bloom is illustrated on the front cover. The flowers are

among the largest of all hemerocallis, and in view of the American public's avidity for magnitude, this characteristic makes a good selling point. The color is light cadmium yellow, the outer half of the petals being overcast with bronzy red.

Strictly speaking, a hemerocallis flower is composed of three petals and three sepals, the latter having assumed virtually the same form as the petals. The three true petals lie within the sepals, and often they hardly can be differentiated. But in the flower of Wau-Bun the difference is easily apparent upon close observation, the sepals being broad and recurving stiffly, whereas the petals are more truly spreading than recurving. Also, the outer half of each petal is pinched backward from the midrib and the tip is somewhat twisted or wavy, thus forming an exceptionally interesting bloom.

Normal flowering is during the latter part of June and on into July, the blooming scapes rising slightly above the evergreen foliage, which has an average height of about thirty inches. Hence, this variety is only of medium stature.

Wau-Bun is a Winnebago Indian name meaning early morn with its rising sun and is a fitting appellation for this hybrid day lily originated by Dr. A. B. Stout, of the New York Botanical Garden. Stock is now available from a few commercial growers.

Propagation is by division, of course. Although with the scarcity of Wau-Bun stock at present there is no danger that anyone in the trade will permit the plants to remain unmolested for any length of time, it is well to mention that much finer day lily plants for selling can be obtained by frequently dividing young stock than by allowing clumps to become old and woody and then breaking them up, a practice not uncommon with the older day lilies.

TREES associated with notable people and the cities in which they are located are listed in the *Arborist's News* for June, 1938. Each listing is accompanied with a brief description as to why the tree is famous.

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